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PRACTICAL ILLUSTRATIONS  
OF THE  
PROGRESS  
OF  
MEDICAL IMPROVEMENT,

FOR THE LAST THIRTY YEARS:

OR,

HISTORIES OF CASES OF ACUTE DISEASES,

AS

FEVERS, DYSENTERY, HEPATITIS, AND PLAGUE,

TREATED ACCORDING TO THE PRINCIPLES OF THE

DOCTRINE OF EXCITATION,

*By himself and other Practitioners, chiefly in the East and West  
Indies, in the Levant, and at Sea.*

BY

CHARLES MACLEAN, M.D.

LECTURER ON THE DISEASES OF HOT CLIMATES TO THE  
HONOURABLE EAST INDIA COMPANY

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## ADVERTISEMENT.

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**T**HERE are four descriptions of persons for whom this work is more particularly calculated.

1st, Students attending my Lectures on epidemic and pestilential diseases, and the diseases incidental to hot climates, camps, and long voyages, for whom it may serve as a text-book.

2ndly, Medical Practitioners, who may not have had leisure, opportunity, or inclination, to enter upon a similar line of experimental enquiry, and to whom the results here presented may suggest new and important views of theory and of practice.



3dly, All non-medical persons, on voyages to the East or West Indies, the South Seas, or other distant destinations, in ships which are unprovided with surgeons, and residents in countries, subject to acute diseases, remote from professional aid.

4thy, Non-medical persons of independent condition and superior intelligence, who, especially in calamitous periods of general sickness, may wish to qualify themselves for the benevolent task of restoring to health those of their fellow creatures, who may be out of the reach of, or feel a reluctance in having recourse to the institutions of charity, and are unable to treat themselves, or to meet the expence of a regular professional attendance.

Examples of the method of cure of different forms of fever, dysentery, hepatitis, scurvy, hæmorrhage, and plague, and of some complex and anomalous affections, may be found in this Collection, applicable, with such variations as will readily present themselves, to the cases of these diseases which most usually occur : from whence the



proper treatment in others may be analogically inferred.

In imitating the practice here enjoined, the principal danger, in most cases, to be guarded against, is that which arises from the cessation of the action of the remedies, after the original disease has been removed. The means of obviating this evil are pointed out, as, upon the cessation of the original disease, by the immediate but gradual subduction of the agents employed as remedies, or the substitution, and gradual subduction of others, equivalent in force. But, even at the risk, by inaccuracy, of occasioning new diseases, it will always be more expedient to attempt to vanquish original maladies, that would otherwise probably prove fatal, than to leave them to their course. The danger from the cessation of the action of the remedies, which may always, by attention, be avoided, is the lesser evil.

From the results in plague, of the practice here recommended, (Cases LXXIX and LXXX), its efficiency in that disease is conspicuous, even when but very imperfectly applied. And with respect



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to fevers of other descriptions in general, as exemplified in Cases **XXIII**, **XXXIV**, **XXXV**, and **XXXVI**, I can with truth affirm, that, since I have become fully acquainted with the proper method of proceeding, I have not, where the correct application of that method could be fully ensured, and where irreparable organic lesion had not already taken place, lost a single patient.

*London, 13 Pancras Lane, Bucklersbury,  
November, 1818.*



# INTRODUCTION

BY THE

EDITOR.



THIS Collection of Cases forms part of a series of works, which I had long designed, comprehending three principal branches of medical research, One already published, relates exclusively to epidemic and pestilential diseases. The present Volume is intended, by facts and experiments, to elucidate the effects of the operation of remedies generally in the cure of diseases. And a third, which will with all due convenience follow, will treat of the elements of medicine, or the principles deduced from the facts and experiments, which are here promulgated. The whole will form a body of Theoretical and Practical Medicine, completed according to certain outlines which I had originally sketched in India, upwards of twenty years ago ; and more conformable I trust, to the



simplicity of science, and the intelligence of the age, than any system of doctrines, which we yet possess.

Were the number of books any criterion of the advancement of science, in the department of which they treat, medicine might be inferred to have already attained that highest point of perfection, at which farther elucidation would be superfluous.

But this is unhappily so far from being true, in fact, that upon quitting the University, and launching into practice on his own account, the young Physician, if he be a man of feeling, must find himself in a most distressing situation. Relying on the knowledge, which he fancies he has acquired, he commences his career with the confidence of success, natural to his time of life, to be certainly succeeded by proportionate disappointment and mortification.

At first, his astonishment is great to find that, in no case of severe disease, is the result of his treatment correspondent with his expectations, whether he attempt to apply the doctrines of Hip-



pocrates, Celsus, or Galen ; Paracelsus, Staahl, or Hoffman ; Boerhaave, Cullen, or Brown.

For some time, distrusting his own discernment, he imputes his want of success to inability to comprehend the doctrines of these celebrated men, or to some error in their application. It is not until after a frequent repetition of similar uncertain processes, and similar unfortunate results, and some closer examination of the subject, that he is led to form a less incorrect estimate of the merits of the doctrines of the schools. In their practical application, he finds, to his sorrow, that those precepts, which speculatively he was wont to regard as infallible, are nothing more than arbitrary dogmas, or mere authoritative assertions ; and that medicine is still too truly in the condition of a conjectural art.

He now becomes sceptical, or indifferent, and would gladly relinquish a profession, of which the exercise can be so little satisfactory to the ingenuous mind. Few persons, however, are so fortunate as to have the power of changing their calling at



pleasure. To those educated to one profession, the opportunity rarely occurs of embarking advantageously in another; and he, who most acutely feels the degraded state of medicine, unable to alter his lot, must yield to the force of circumstances. Principles being unacknowledged, or not ascertained, the candidate for medical employment must, if he would succeed, submit to cultivate the profession as a trade; content, like others, to allow the justification of his failures to rest upon the authority of the precepts of the schools.

Proportionally greater are the perplexities of the young practitioner, in those situations, as between the tropics, where the prevailing diseases are severe, and their progress rapid. Upon commencing medical practice, as Surgeon of an East Indiaman<sup>1</sup>, about thirty years ago, I felt myself precisely in the predicament here described. I found that the knowledge which I had imbibed from books and lectures in Europe, and had been treasuring

<sup>1</sup> Although the Medical Officers of East Indiamen are designated Surgeons, their functions and education are more properly Medical.



up as an invaluable inheritance, was so far from being of service in India, that it was both misleading and pernicious.

Under the impressions made by these circumstances, I could not determine to continue the exercise of the profession into which I had been thrown, without attempting something new. I conceived that, however it might have been my duty, if medicine had been an established science, implicitly to conform to the doctrines accredited in the Universities and Schools of Physic, it was, in its acknowledged state of a conjectural art, not only admissible, but laudable, to deviate from the common tract of servile imitation ; and to attempt, by rational experiment, to promote improvement.

In cases of extreme disease, in which we are warranted by experience in considering all the usual and ordinary methods of treatment as unavailing, and death, unless new or untried methods be speedily resorted to, as certain to ensue ; I conceived that I was not only justifiable in departing from the common rules, but that it was even



incumbent upon me to endeavour to give to patients, under such circumstances, by means justified by inference or by analogy, or by any other probable ground, some additional chances of alleviation of suffering, prolonged existence, or recovery ; regarding an opposite course as more frequently prompted by selfishness, seeking to avoid the responsibility of innovation, than either by sound discretion or superior wisdom.

Such must be my apology and justification, if apology or justification be necessary, for having, in the hot and unwholesome climates of Bengal, Batavia, Bencoolen, and Jamaica, as well as in long voyages, and in various countries of Africa and of Europe, ventured to have recourse to modes of practice unauthorized either by books or lectures.

My propensity to free enquiry, originally strong, and further stimulated by a sense of the incomprehensible, false, and often palpably pernicious doctrines, respecting the nature and cure, and the cause and prevention of diseases, delivered from the most accredited sources, was cherished



into active exertion by an early concurrence of circumstances peculiarly favourable to experiment and research.

The great independence of mind, which prevails among the faculty in the East and West Indies, but more especially in the former, from the superior organization of the East India Company's extensive medical establishments ; together with the necessity under which the conscientious Physician finds himself, in these countries, of abandoning, in cases of severe disease, the erroneous, contradictory, or frivolous hypotheses, which he had learnt in the European schools ; not only admit of, but even enjoin an increased freedom of investigation ; of which a more efficacious, as well as a more discriminating practice, are the inevitable results.

The experiments which I projected, in pursuance of these views, were always first essayed upon my own person, either in sickness, or in health. A more than ordinary susceptibility to fevers supplied me with frequent opportunities of



repeating these processes, with a curative intention. Besides minor febrile affections, I have a distinct recollection of having suffered no less than eight severe attacks of fever, in various climates, viz. two in Bengal, one in Batavia, one in Bencoolen, one in Jamaica, one at sea, one in Germany, and one in Turkey.

The facts and inferences furnished by these illnesses, although I was not always sufficiently careful in preserving memorials of them, proved of considerable service during my subsequent researches. Although the agents employed were different, according to circumstances, necessity, or particular views, the principles upon which the treatment was conducted, were, upon all these occasions, similar to those, by which the practice has been regulated in the cases more particularly recorded.

In the state of health, numerous experiments were also made upon my own person, in order to ascertain particular points, in regard to the manner in which health and disease are produced



by the operation of the exciting powers. Of these an example is given in Case XXXIII. of this Collection.

Certain results being ascertained, the treatment of diseases ceases to be merely experimental. It then becomes the employment of determinate processes, in order to produce determinate effects.

Examples of such processes, as applied for the cure of diseases in general, acquiring progressive elucidation and developement during a period of thirty years, are here presented to the public, both from my own practice, and from that of other persons. They are offered as constituting at once the foundation of medical principles, and instances of their mode of application.

In this attempt, extensively to apply the principles of inductive philosophy to medicine, it has been endeavoured that doctrines should be clearly deduced from facts; not facts accommodated to doctrines: and, although the progress, which has been made, cannot be said to constitute more



than a few incipient steps in the right path of enquiry, it appears reasonable both to hope and to expect, that the results of researches, more multiplied and extended, in the tract of investigation, which is now so clearly indicated, will be finally to establish rules, by which remedial means may be applied, with perfect safety, in quantities hitherto, from their misapplication, found pernicious or destructive; and, by which, when there is no irreparable organic lesion, an almost unlimited command may be acquired over diseases.

The Cases not my own, in this collection, were communicated by Dr. William Yates of the Madras establishment, Dr. James Robertson, of the Bengal establishment, Mr. Syme, Surgeon of the Dublin East Indiaman, and Mr. Crout, formerly Surgeon of the Dover Castle East Indiaman, and now of St. Helena. Of these Cases, some occurred in the East, and some in the West Indies; some in Africa, and some in Europe, and some at sea. They were all recorded as they occurred; and are now published, with the exception of a few verbal alterations, as they were



recorded. To these are added some Cases of plague, which were treated by myself, in Turkey, in 1815; some Cases of burns, from the ignition of gun-powder, which happened in 1794, but had been formerly omitted; and the treatment of two cases of fever, according to the same principles, communicated by Medical Officers of East Indiamen, to the East India Company's examining physician, Dr. William Dick.

The histories of Cases comprehended in this volume (which may possibly be followed by others) exceed eighty in number. The first twenty-two, as treated by Dr. Yates and myself, at an early period of these reseaches, are reprinted from "A View of the Science of Life," and "A Treatise on the Action of Mercury upon Living Bodies," as originally published in India, in 1796, and shortly afterwards republished in America; but not hitherto promulgated, or generally known in Europe. The rest are almost all subsequent contributions, which now appear for the first time.

Of this description are the cases of Dr. Robert-



son, Mr. Syme, and Mr. Crout, which were communicated to me, between the years 1796 and 1800, under an unlimited discretion, in respect to the time and manner of their publication. To these friends, as well as to the public, I feel that both an apology and an explanation, are due, for the great delay, which has, in this respect, taken place.

To have, without strong grounds, neglected, for a single moment, to give publicity to their valuable materials, would, I am sensible, have argued a culpable indifference to the subject, and an unpardonable disrespect for the communications of my friends. It would have been, besides, wholly inconsistent with my habitual and known zeal for the advancement of medical improvement, as well as with the desire which I must naturally have felt for the confirmation of the doctrines, which I had previously promulgated, not to have availed myself, as early as possible, of the evidence of their additional facts, in favour of my original conclusions.



The truth is, that the delay arose entirely from a conviction, founded upon much experience and attentive observation, that the current of medical authority, and prejudice, still continued to run so strongly in an opposite direction, that an earlier publication might have been premature, and detrimental, rather than useful to the cause of truth, and free enquiry. This also seemed to have been the opinion of Dr. William Dick, who did me the favour, in 1814, as well as on a previous occasion, to peruse this Collection of Cases; and by the sanction of whose superior and more unbiassed judgment, my resolution of postponing their publication at these periods was confirmed.

To enable me to stem the prevailing torrent of adventitious obstacles, appeared to require some extraordinary concurrence of favourable circumstances. In the gradual diffusion, for nearly a quarter of a century, of the practice, and principles, which I had originally inculcated in India, in as far as they have been understood; in my successful application of them, to the cure of the plague of the Levant, in 1815; and in my



subsequent refutation of the fraudulent, and pernicious doctrine of contagion as the cause of epidemic and pestilential diseases<sup>2</sup>, together with the increasing pace of general knowledge, and the circumstances which have marked the prevailing epidemic of these kingdoms, I think I have now found such a concurrence. The precise period, I conceive, has at length arrived, at which the Cases so long held in reserve, may be brought forward, with the certainty of ensuring the triumph of principles; and beyond which delay would become unpardonable.

The Cases in this Collection, are arranged nearly in the order of their dates; by which means they serve to give an historical view of the manner, in which inferences were successively obtained, and principles gradually developed. The

<sup>2</sup> Results of an Investigation, respecting epidemic and pestilential Diseases, including Researches in the Levant concerning the Plague, in 2 vols. 8vo. London 1817, and 1818. In Vol. I. p. 133—136, the reasons of my long silence are adverted to.



earlier Cases, however deficient in correctness, are in so far curious and interesting, as they shew in what manner, and by whom the principles here exemplified were ascertained, and first introduced into common use. They establish dates and circumstances, which set these points definitively at rest, and admit not of the future intrusion of pretenders.

In the course of the narration, nothing is exaggerated on the one hand, or extenuated on the other. Fatal terminations, as well as recoveries, are given with fidelity. Mistakes, inaccuracies and errors, are candidly acknowledged. In the Selection of Cases, such examples only have been chosen, as seemed best calculated to elucidate particular points, without reference to the final issue. Where the verification of the processes employed by nature, in regard to health and disease, is the object sought, disingenuousness, or concealment would be misplaced.

The difference of treatment, at different dates, will serve to shew the progress of elucidation, at

successive periods. Previous to 1793, my ideas of the manner, in which the application of the exciting powers is succeeded by health and disease, were vague and indefinite; and, in respect to the means of preserving the former, and removing the latter, the practice proportionally inaccurate and inert. The erroneous notion that salivation is necessary to the cure of those diseases, for which I had found mercury to be an efficient remedy, I had not yet entirely relinquished: and this pernicious error, which, in 1796, I was at much pains to explain and to abjure, has been clung to, by succeeding writers, and practitioners, with much greater fondness, than any of my real improvements.

It was in 1793, as I have stated, that the manner in which health and disease succeed the application of mercury, was first ascertained, by observation of its effects, during the treatment of a case of *Coup-de-soleil*, in my own person<sup>3</sup>. From that period, the practice began to assume a greater consistency. But it was not until 1796, that the

<sup>3</sup> Case XI.



utility was ascertained, of repeating the doses of remedies, at intervals corresponding with the duration of the action of each dose<sup>4</sup>. In the Cases of Mr. Syme, in 1797, and of Messrs. Robertson and Nelson, midshipmen on board the *Busbridge East Indiaman*, in 1799, the principles in question were, in regard to mercury, applied in a manner closely approaching to scientific correctness<sup>5</sup>.

By strict analogical reasoning, they were afterwards extended to all agents, and to all diseases.

The following is the progression in which it appears, from these Cases, that mercury has been successfully applied, as an exciting power, for the cure of various affections, which had usually been considered as different diseases, and in which it had not before, excepting incidentally, or as an evacuant, been employed: In 1789, for the cure of intermittents: in 1790, for the cure of yellow fever, gout,

<sup>4</sup> As exemplified in various Cases of this Collection.

<sup>5</sup> Cases xxiii, xxxv, and xxxvi.

principles, which, upon a repetition of similar processes, under similar circumstances, should be found correct, by all the world. Until they can do this, persons having more regard to truth and science, than to the authority of names, will desire to be excused for not being able to yield the smallest degree of faith to bare assertions of the efficiency of a practice apparently so contrary to reason, and to common sense. The days of miracles are past. And even the influence of the Pope can no longer maintain in authority the twin-brother of blood-letting ; the stupendous error of contagion in epidemic diseases.

To those who may be disposed to regard the doses of medicines here prescribed, as, according to their views of the subject, excessive, I would beg leave to suggest a few considerations :

1. It would be unreasonable to form any judgment respecting the application of the principles of the doctrine, according to which remedies are here exhibited, by the dogmas of any preceding systems.



2. As, according to the principles in question, the strength of the remedies must invariably be regulated by the degree of the disease, if they often enjoin larger doses, they not less frequently enjoin smaller ones, than is consistent with the dogmas of the common routine practice, or conjectural art of medicine. Of calomel, for instance, whilst, for the robust constitutions, and acute diseases, of soldiers and sailors, in hot climates, and at sea, the higher doses, as four, six, eight, ten, or even fifteen or twenty grains, are often indicated ; we shall, in general practice, have much more frequently occasion to use one-fourth, one-sixth, or one-eighth, of a grain, at each dose, than any larger quantity : and so of other agents.

3. It would be extremely unfair, and could only be a wilful error, to consider the cases, contained in this volume, as conveying examples of what ought to be done, in general practice, in temperate regions. They are not, by any means, so meant. On the contrary, they are given as examples of Cases, involving a concurrence of circumstances, as high temperature, robust constitutions, and inveterate diseases, but rarely to be met with, in

general practice, in Europe, and requiring, for their cure, an application of the exciting powers, in their highest degrees. In such cases, to apply one-fourth, one-sixth, or one-eighth of a grain of any medicine, as one should do in the case of a delicate female, or child, ill of a slight disease, and residing in a temperate, or cold climate, would be no less inappropriate and absurd, than to apply to the latter the high degrees of remedial power, which are found necessary to remove the diseases of the former<sup>6</sup>.

In the application of the principles of the doctrine of excitation to the diseases of the Hindu, whose principal food is rice ; or to the prevailing epidemic of this kingdom for the last three years (1816, 17 and 18), produced by causes, which, although operating extensively among the people, do not act with such intensity upon individuals as to affect them dangerously, the doses necessary

<sup>6</sup> These powers, too, as here employed, may appear to be of higher degree, than they really are : for the medicines used, in hot climates, and long voyages, being obtained for the most part, from Europe, may be presumed to have lost some of their strength, before they come into application.



would, in general, be comparatively small ; for the most part considerably under the sum applied in the Case of Mr. Robertson, midshipman of the *Busbridge*, (Case XXXV.) which affords an instance of the smallest quantity of exciting power applied, in any case of fever, in this collection. In ordinary cases of the prevailing epidemic, one grain of calomel, with one-third of that quantity of opium, repeated every two hours, would probably be sufficient. With this sum of exciting power, I have recently effected cures of fevers in London ; but I have also found it necessary to double, triple, and quadruple that quantity.

It is in duly apportioning the *sum*, and in allotting the *kind*, of remedial power, to the sum of disease, and the nature of the organs affected, that medical skill may be said almost wholly to consist. And, provided the mode of preventing the diseases, which succeed the application of the remedies themselves, were fully understood, and enforced, there would be much less danger to the patient, from the application of a degree of remedial power, even beyond what might be neces-

sary, than from that of a degree, that should be inadequate to remove the original malady. It is only under that misapplication of remedies, incidental to the routine practice of medicine, that injury can arise from this source.

Principles being known, and their application understood, all declamation against large doses of medicines, applied under them, would cease.

But, in the mean time, attempts to apply high exciting powers, by persons not sufficiently informed, respecting these facts and inferences, and only presuming upon their knowledge of dogmas, acquired in the medical schools, must be admitted to be highly dangerous, and are most earnestly to be deprecated.

It is an error of very great importance, arising from the contemplation of the effects of the ordinary mode of applying remedial agents, that, when a patient is weak, he cannot bear the operation of the exciting powers in any considerable



degree. This error particularly prevails with respect to mercury. The fact is, that, when a patient is weak, he not only requires a greater sum of exciting power; but, provided the power applied be proper in kind, adequate in degree, and its action duly supported, it will give him a constant acquisition of strength. It ought constantly to be held in mind, that, the danger arising to patients, in every stage of debility, from the exhibition of powerful agents, is never occasioned by their direct and continued action, whilst that remains below the degree of intensity which produces immediate lesion of organs; but always, by the sudden diminution, suspension, or cessation of their previous intense action.

The weak, it is true, are much less able to bear the effects of the cessation of the action of remedies, than the strong: and it is necessary also to be aware, that, in those delicate cases, which require a perfectly correct administration of them, the application of scientific principles is, for various reasons, generally so very difficult, and, in ordinary life, so often

impracticable, that in making the attempt, the noxious effects of an irregular action will, for the most part, be allowed to arise. Hence the reputation of the physician will frequently require that he should abstain from attempting to apply his knowledge to practice. And when injury arises from attempts to apply unusually high degrees of exciting powers, by persons either wholly ignorant, or but half-informed, respecting the principles of the doctrine of excitation, it is the misapplication, not the fault, of the doctrine; and can only be remedied by rendering the knowledge of it more accurate and more diffused.

In the treatment of the cases, published in this volume, it is not pretended that the degrees of exciting power administered have been always, or even often, exactly appropriate. In the progress of ascertaining principles, it would be too much to expect that they should be correctly applied. But it is sufficient for my purpose, if, whilst it conveys a general idea of the mode in which remedial agents ought to be employed, for the removal of disease, the very imperfect application of them



here announced, should appear to produce effects, in any obvious degree, superior to the ordinary routine of medicine, in its state of a conjectural art.

Although it has happened that mercury and opium were the agents principally employed, no exclusive virtues are, however, attributed to them. It is not supposed that any agent has an exclusive power of curing any disease ; although, in all diseases, some agents are more appropriate than others. Mercury, from its considerable action over the system in general, but more especially over the vascular and glandular parts, is an appropriate remedy in many ; but it is, in no one, exclusively so : and, even in those diseases, in which it has been improperly considered a specific, there are undoubtedly some, and probably many remedies, if not equally, at least sufficiently appropriate.

Similar observations will apply to opium, in its relation to the brain and nerves.

The preference here given to mercury and opium, then, was founded, together with their

being considered stimulants appropriate in kind, upon the necessity, in diseases of high degree, of employing remedies of high power, and upon the administration of these being more familiar, in practice, than that of other agents of equal intensity.

A knowledge of the manner in which salutary and noxious effects, i. e. health and disease, arise, in consequence of the operation on the living body, of exciting powers of the higher order, it was also presumed, would involve a knowledge of the principle of action of those of inferior degree, and consequently of the nature and cure, and cause and prevention, of all maladies.

The principles, as deduced from, and exemplified by these cases, upon which mercury <sup>7</sup> and opium

<sup>7</sup> It is proper to state, that, in my experiments, regarding the internal administration of mercury, the old submuriate was the preparation usually employed. In proportioning the doses, therefore, allowance should be made for whatever difference in strength may exist between it, and the submuriates, as now prepared. Respecting the comparative merits, as remedies, of the different preparations of mercury, I have not



have been deemed to be appropriate remedies, in all acute general diseases (i. e. in all acute diseases, in which the circulating system especially is particularly affected) were in part explained, in my Medical Tracts originally published in India. They have been recently still farther elucidated, in my “Results of an Investigation respecting Epidemic and Pestilential Diseases, &c;” and I propose that they shall receive additional illustration in my “Elements of Medicine,” now preparing for the press.

During these researches, I have had occasion to observe that, the action of a combination of remedies will frequently be more appropriate than that of any single remedy, of which the compound may be formed. This might be obviously expected to result from organs different in their structure being, at the same time, affected with disease. Calomel and opium, for instance, combined in the proportion of three parts of the former to one of the latter, seems a more appropriate remedy,

given any opinion, not considering myself as possessed of sufficient data to arrive at satisfactory conclusions.

in fevers, than either of them separately <sup>8</sup>. The combinations of powers, which may thus be made, are infinite ; but how far each may be appropriate cannot be judged of a priori, from the chemical or other properties, of its component parts. To ascertain the effect of each combination, would require a particular set of experiments. And, by the rules deducible from the principles of the doctrine of excitation, as now understood, such experiments may be conducted, without the smallest danger to the most delicate constitution.

To each of the following Cases, it has been thought expedient to annex some remarks, which, it is presumed, will be found useful, by suggesting comparisons between the old and the new modes of practice, as well as by pointing out errors in the latter, which ought to have been avoided ; thus leading to a more correct knowledge, by uniting practical with theoretical elucidation. In the execution of this task, the frequent occurrence of similar comparisons, and of similar errors, have rendered some repetition unavoidable.

<sup>8</sup> The principles, which regulate these proportions, and combinations, have been elsewhere stated.



It is proper to observe, that the course of experiment, which I instituted and pursued, was originally, in a great measure, suggested by the ingenious doctrines of the "*Elementa Medicinæ Brunonis*." But those have either completely misunderstood, or designedly misrepresented, my conclusions, who have affected to consider them as not differing from the conclusions of my celebrated countryman, excepting in their alleged extravagance. The difference between them will be found to be great and essential. With preceding physicians, at least with systematics, of modern times, it has been usual to assign a distinct nature, a distinct proximate cause, and a distinct mode of cure, to each affection of an organ, which they have considered as so many separate diseases. By reducing this indeterminate number of maladies to three classes, Brown considerably circumscribed the basis of false knowledge in medicine. But, instead of carrying simplification, as has been unjustly alleged, too far, it now appears, that, by not carrying it far enough, his system has been vitiated by many of the worst errors of his predecessors. Instead of three classes of diseases, having three different natures, three proximate causes, and three modes

of cure, as laid down by Brown, it has resulted from more extended researches, that, in nature, there is to be found but one. Rejecting diseases of indirect debility, and of excessive excitement, facts and inferences authorize the reception of only one class of morbid affections, which consist in deficient excitement, are occasioned by deficient excitation, and to be cured by a proportional increase of the action of the exciting powers<sup>9</sup>. If these ideas be correct, it follows that the treatment recommended by Dr. Brown, was, in two, out of his three classes of diseases, erroneous ; as well as his reasoning concerning their nature and cause : yet, it is by attempting to assimilate them with the doctrines of this illustrious medical philosopher, which they had so grossly vilified and misunderstood, that those, who would oppose their reception, have, without the smallest comprehension

<sup>9</sup> The term "indirect debility," it will be observed, has been used only in the earlier Cases of this Collection. In the latter ones, it has been rejected as conveying erroneous ideas. All diseases are capable of being shewn to consist of deficient excitement, from a direct diminution of excitation. But this and other principles will be more distinctly elucidated in my "Elements of Medicine," shortly to be published.



of the subject, endeavoured to discredit my conclusions.

But, notwithstanding this wide and essential difference between the doctrines of Brown, and those inferences which I have been enabled to deduce from a long continued series of experiment and observation, I feel it incumbent upon me to declare, that, in my opinion, his fundamental proposition will for ever remain the foundation of medical science, or rather of the science of life. The particular merits of my own researches, I consider as consisting in the perseverance with which I have endeavoured, in defiance of every species of obloquy, to raise a superstructure, I trust not wholly unworthy of such a foundation ; and in the manner, as far as my abilities and opportunities have enabled me, which the ingenious author would himself probably have adopted, had circumstances allowed him, under ordinary advantages, to have prosecuted the investigation for a sufficient length of time <sup>1</sup>.

<sup>1</sup> The almost universal outcry, raised by the medical faculty against his innovations, precluded Dr. Brown from en-

Of the new inferences which have arisen, in the course of my investigation, it would be uncandid not to avow, that many are due to an interchange of ideas, with the ingenious and zealous friends already mentioned, as my coadjutors. But as it would be impossible now to particularize the suggestions which may have belonged to each, I must content myself with expressing, generally, my most heartfelt thanks, for their cordial and able co-operation <sup>2</sup>.

joying the common opportunities of induction, which would have been afforded by even a limited medical practice ; and circumstances, unfortunately, did not permit him to await the slow operation of time. But, to have done more, almost without the benefit of experience, toward laying the foundation of medical science, than has been done by any, or all, his predecessors, with every aid, which that powerful preceptress could bestow, must be admitted to be an unequivocal proof of the extraordinary genius of that illustrious Physician ; whilst the eager disposition, which has been manifested, to crush, rather than to improve upon, his discoveries, will remain an indelible reproach to the medical authorities of the age.

<sup>2</sup> Whilst these sheets are printing, I learn, with sorrow, that my worthy coadjutor, Dr. Robertson, is no more. After having rescued many others from the ravages of a malady, so often fatal to Europeans in India, he is said to have himself recently fallen a sacrifice to hepatitis, in Bengal.



I have also to acknowledge, and I do so with much pleasure, the uncommon liberality, and, if I might presume to add, approbation, with which my endeavours, toward medical improvement, have always been received, and encouraged, by Dr. William Dick, formerly of Calcutta, and since distinguished, for his skill, in the metropolis of this kingdom; whose authority, as, for many years, the first practitioner of the capital of British India, will be admitted, in respect to the treatment more especially of the diseases incidental to hot climates, greatly to outweigh, in as far as this species of evidence may still be thought entitled to consideration, in matters of science, that of such practitioners of Europe, as may conceive themselves qualified, with less appropriate experience, to pronounce an unfavourable judgment.

*London, 13, Pancras Lane, Bucklersbury,*

*November, 1818.*





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ERRATUM.

Page 112, line 24, *for* Case XLI, *read* Case LXIII.



# HISTORIES OF CASES,

&c. &c.

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## CASE I.

*Intermittent cured by mercurial Friction, by the  
Editor, in January, 1789, at Sea* <sup>1</sup>.

THE first trial of the efficacy of mercury in fever was made upon myself. In January, 1789, on the passage from Bengal to England, having been seized with a quotidian intermittent, tartar emetic, and afterwards bark, with now and then a cathartic medicine, were, as usual, exhibited. Under this mode of treatment, I daily became weaker, and in the course of three weeks, during which the same plan was persisted in, my legs became œdematous, the paroxysms of fever more severe, and I could with difficulty rise out of bed.

<sup>1</sup> The first Twenty-two Cases in this Volume, twenty of them by the Editor, and two by Dr. Yates, are reprinted from "A View of the Science of Life," and "A Treatise on the Action of Mercury on Living Bodies," published in India, in 1796, but not republished in England.

The *evacuant* and *antiseptic* plans were now entirely abandoned ; and between two and three drachms of mercurial ointment, were rubbed upon my body, at bed time. The alteration, which this single rubbing produced, was equally unexpected and salutary. I slept the whole night ; and in the morning, awoke in a gentle perspiration, without fever, pain, or any disagreeable symptoms, excepting œdema and general debility, remaining. The ointment was rubbed in, three or four times ; and I had no return of fever. My mouth was not affected ; and I speedily got well. The issue of this experiment made a deep impression on my mind, and determined me, in future, to use mercury in every case of intermittent fever. Having obtained a slight knowledge of the Brunonian doctrine, I thought myself in the state of the benighted traveller, to whom Brown, with so much justice and elegance, compared himself, upon the first discovery of his doctrine \* \* \* “ *veluti* “ *viatori, ignotâ regione, perditis viæ vestigiis, in* “ *umbrâ noctis erranti, perobscura quædam, quasi* “ *prima diurna, lux demum adfulsit* <sup>2</sup>.” I inferred that mercury, in common with *many* <sup>3</sup> other medicines, was a stimulant power, and would, therefore, be useful in all diseases of indirect debility. As, according to the same principles, it appeared that other fevers differed from inter-

<sup>2</sup> *Elementa Medicinæ.*

<sup>3</sup> *All*, according to the present ideas.



mittents only in degree; and as mercury was found a certain cure for intermittents; I thence concluded that fevers, whatever their nosological distinctions, were the proper cases, by which to subject the theory to farther proof.

---

## CASE II.

*Yellow Fever cured by Mercurial Friction, in 1790, in Jamaica.*

ONE of the first instances, in which an opportunity of trying the practice in other fevers occurred, was the following: Having made a voyage to Jamaica, in the interval of two voyages to Bengal, I was, early in 1790, on a visit to my friend, Dr. Hector Maclean, of Russel Hall, in the parish of St. Mary's. During my residence there, an European book-keeper upon the plantation, by name — Macmillan, was seized with typhus<sup>4</sup>, or the common yellow fever of that country. When I first saw him, he was comatose and picking the bed clothes; he had got some purges, and had been taking bark. His pulse was quick and

<sup>4</sup> It is almost unnecessary to observe, that nosological distinctions are totally disregarded, as incompatible with the principles of the doctrine of excitation. Generic names are, for convenience, sometimes retained.

small; his tongue black and furred; and he was supposed beyond the possibility of recovery. I represented to Dr. Maclean the good effects produced by mercury, in other cases of fever, and requested that he would permit it to be tried in this; to which, with a liberality, not always to be met with from established practitioners, he readily consented<sup>5</sup>. About an ounce of strong mercurial ointment was immediately rubbed on the patient's body. But, as in typhus, this was a new experiment, I did not choose wholly to trust to the mercury; and therefore desired that he might be allowed a wine glassful of Madeira every hour<sup>6</sup>.

The next day he was still insensible; but sat up in bed, and searched, as it were instinctively, for the Madeira bottle. When it was given him, he would not consent to part with it; but held it firm, between both hands, as if something, upon which depended his existence. The ointment was again rubbed in, by guess, twice in the day, the quantity about half an ounce each time; and the

<sup>5</sup> This gentleman had been a practitioner of reputation. But had then retired from the exercise of his profession, and resided on his estate.

<sup>6</sup> This is but a small quantity of wine in typhus fever. In some cases it may be necessary to give three or four bottles, in the twenty-four hours. In others, wine, in any quantity, is not sufficiently powerful. Recourse must then be had to the more diffusible stimuli.



wine was continued. He was perceptibly getting better. The same treatment was persevered in ; and at the end of five days, from the commencement of it, he walked, in the verandah, in a state of convalescence. It was some time, however, before he entirely lost the fatuitous look, which has been noticed as a symptom of yellow fever. His face was a little swelled, and his gums slightly affected by the mercury. During convalescence, he took wine and bark freely.

This recovery, although it appeared surprising, was still only regarded as accidental. The idea of using mercury in fevers, was treated, by the generality of medical men, as an extravagant chimera ; or, at best, a mere ebullition of Bruno-nianism, which they had learnt at school, to consider as heretical<sup>7</sup>. But these rebuffs by no means discouraged me from prosecuting my researches, as will appear from the following remarks, extracted from a medical journal, which I kept in the year 1790 :

<sup>7</sup> From this it may be inferred, how well the doctrine has been understood, by those who have pretended to sit in judgment on it. The use of mercury, as a stimulant power, results as an obvious inference from the medical principles of Brown. But not more so than tartar emetic or salts. He did not perceive these inferences himself ; from whence it will appear, that, instead of pushing the consequences of his doctrine too far, he did not extend them far enough.

“ Mercury is universally allowed to cure lues  
 “ venerea. All writers on hepatitis concur, in  
 “ extolling its virtues in that disease. I have  
 “ experienced its efficacy repeatedly in intermit-  
 “ tent fevers, once in typhus, twice in gout, and  
 “ once in bleeding discharges. A case is re-  
 “ lated in the London Medical Journal of 1786,  
 “ (page 413) of obstructed menses, cured by  
 “ calomel. Affections produced in irritable habits,  
 “ by the transplantation of teeth, have also been  
 “ cured by mercury; and hence, these diseases  
 “ have, in my opinion, very erroneously been sup-  
 “ posed venereal.”

This conclusion, which is certainly not just,  
 must have been productive of the most disagree-  
 able consequences. The very idea would severely  
 wound the feelings of delicate and modest fe-  
 males: among whom diseases, from the trans-  
 plantation of teeth, have most frequently arisen.  
 Besides the injury to the constitution, from an  
 excessive use of mercury, supposing the disease  
 to be venereal. In that disease, mercury is usually  
 given, in much larger quantities than is necessary,  
 and very seldom in such a manner, as to produce  
 the best possible effects. In fact, ulcerations pro-  
 duced by the improper exhibition of mercury,  
 may be cured by such an application of the same  
 power, as to support the general excitement. The  
 same journal proceeds thus :



“ As it must be allowed that mercury, like  
 “ every other power, can have but one uniform  
 “ operation upon living bodies, it may fairly  
 “ be concluded, that all the diseases, which it  
 “ cures, are of the same kind. And as some  
 “ of these are certainly diseases of debility, the  
 “ rest must be diseases of debility also<sup>8</sup>. I in-  
 “ fer therefore, with as much confidence as  
 “ analogical reasoning can justify, that mercury  
 “ is useful, in every disease of debility<sup>9</sup>. But  
 “ I would not be understood to prefer it in  
 “ every case, nor totally to rely upon it in any.  
 “ For, even in lues venerea, where it is generally  
 “ a certain cure, it often requires the aid of other  
 “ stimuli, particularly opium, wine, and bark ; or  
 “ to be alternated with them, when from habit, it  
 “ begins to lose its effect.”

<sup>8</sup> This proposition, although of easy comprehension, does not seem to be generally understood. It means that all diseases, which can be cured by the same powers, must depend upon a similar state of the body, by whatever powers that state may have been produced. Thus the matter of small-pox, and the powers which produce dysentery, and typhus, must occasion a similar state of the body, differing only in degree ; for they are all cured by the application of the same powers, differing only in degree.

<sup>9</sup> These observations are deficient in accuracy. They were originally written for my amusement, without any intention of publishing.

## CASE III.

*Gout and bleeding Piles cured by mercurial Friction &c. extracted from a Medical Journal kept by the Editor in 1790, in Jamaica.*

“ Mrs. E—— B——, of Kingston, Jamaica,  
 “ aged forty years, had been accustomed to live  
 “ freely, and was subject to frequent attacks of  
 “ gout. Having been occasionally at her house,  
 “ she sometimes asked my advice. In the course  
 “ of a short space of time (for she was subject  
 “ to frequent paroxysms) she was cured of two  
 “ attacks of gout, by mercury, opium, and the  
 “ warm bath; but mercury was the principal  
 “ power applied. On the 8th of August, 1790,  
 “ she complained of an incessant menstrual dis-  
 “ charge, alternating with a discharge of blood from  
 “ the piles. These symptoms she said had com-  
 “ menced seven weeks before, occasioned, as she  
 “ thought, by fear; and, for some days, had been  
 “ accompanied with head-ache, pain of the back,  
 “ loins, and other feverish sensations.—Her sto-  
 “ mach was very irritable, and could bear nothing  
 “ liquid in the morning, excepting water, accidu-  
 “ lated with elixir of vitriol, or ginger tea. She  
 “ had a troublesome cough, and pain of her side;  
 “ which she supposed to arise from an affection of  
 “ the liver. This idea she was rather encouraged



“ to entertain, that an opportunity might be got  
 “ of trying the effects of mercury in bleeding  
 “ discharges. Two drachms of mercurial oint-  
 “ ment were rubbed on her body in the evening,  
 “ and she was desired to take a draught, with  
 “ forty drops of tincture of opium, every four  
 “ hours, through the night. Her legs were im-  
 “ mersed in warm water. She was advised to  
 “ take solid food only; and to use for drink,  
 “ water strongly acidulated with elixir of vitriol,  
 “ or ginger tea. August the 9th, the ointment  
 “ and laudanum had been used as directed. She  
 “ had no fever; her head-ache was less severe;  
 “ and she perspired freely. The menses ceased  
 “ to flow, and a discharge commenced from the  
 “ piles. She was still encouraged to believe that  
 “ her liver was affected; and the medicines were  
 “ ordered to be continued. August the 10th, she  
 “ was in all respects better. The discharge from  
 “ the piles was considerably less.—One drachm  
 “ of ointment only was rubbed in, and the tincture  
 “ of opium was omitted. 11th, the ointment was  
 “ once more rubbed in. The discharge from the  
 “ piles entirely ceased; and she had no return of  
 “ any of her symptoms.”

Those who are inclined to question the effi-  
 cacy of mercury, in diseases of indirect debility,  
 may object that, as other powers were, in this  
 case, combined with it, the cure cannot fairly be

attributed to the mercury alone. That is very true. All the other powers performed their respective parts. But, from a thousand analogies, I think it may be affirmed, that mercury alone would have been sufficient. In general, when several powers can be applied to different parts of the body, either in concourse or succession, so as to support the excitement regularly, and with equality, it is much better to have recourse to many, than to trust entirely to one.

The effects of mercury, in fevers and other diseases of indirect debility, were mentioned in conversation with medical men, in many parts of the Island of Jamaica; most of which I visited in 1789-90. The idea, as usually happens, was endeavoured to be ridiculed, and the facts to be discredited. It has since that period, however, come into general practice in Jamaica, the other West India Islands, and in America, as appears from Dr. Duncan's Medical Commentaries, for 1795'. By this history, it is not intended to claim any more merit for the introduction of that practice, than each reader may be disposed to allow. Provided the facts be admitted, the origin and progress of the discovery is of little consequence. As the practice, in so far as it is good, is but a mere application of the principles of Brown, the

<sup>1</sup> Page 348 to 354.

whole merit of it is, in my opinion, justly and solely due to the doctrine of that most ingenious physician.

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## CASES IV. V. VI. AND VII.

*Intermittent, Jaundice, Ophthalmia, Hectic, cured by Mercury, &c. in 1791, at Sea.*

THE following extracts, from the Medical Journal of the English East India Company's ship Northumberland, in the years 1791 and 1792, will farther shew the manner, in which the application of mercury, upon the same principles, was extended to diseases, in which it had never, to my knowledge, been used before.

“JOHN HURST's Case<sup>2</sup>, is a proof of what  
 “ I have experienced on several occasions, and  
 “ first of all tried upon myself,—the efficacy of  
 “ mercury in intermittent fevers. In all the Cases  
 “ (not less than ten or twelve) in which the  
 “ experiment was fairly made, I have not known  
 “ it to fail once, where the mercurial ointment  
 “ was used in such quantity as to affect the mouth.

<sup>2</sup> A case of intermittent. The observations refer to particular Cases in the Journal.



“ The soreness of the mouth, seems to be a sign,  
 “ that the system is sufficiently excited, to over-  
 “ come diseases of debility<sup>3</sup>. A man in health, or  
 “ in a state of high vigor, is much sooner affected,  
 “ than a person in a low, languid condition. In  
 “ the Cases of John Hurst<sup>4</sup>, William Smith<sup>5</sup>,  
 “ — Cummins<sup>6</sup>, and Paul Harris<sup>7</sup>, the quantity  
 “ of mercury used before salivation was produced,  
 “ seemed to be inversely as their vigor. This  
 “ proposition is farther confirmed by a fact well  
 “ known to practitioners, that by premising blood-  
 “ letting, more opium or mercury may be *safely*  
 “ thrown into the system.”

Although it is rather deviating from the subject,  
 it is worth while to pause a moment in admiration

<sup>3</sup> This is incorrect. The soreness of the mouth arises from a state of indirect debility, in consequence of the sudden subduction, or irregular application of mercury.

<sup>4</sup> Intermittent—<sup>5</sup> Jaundice—<sup>6</sup> Ophthalmy,—<sup>7</sup> Hectic fever.—  
 These patients were prescribed for, without any other rule, than to rub in a certain portion of mercurial ointment daily, until the disease should cease, or the mouth become affected. But this, as I have since found, is not a proper mode of exhibiting mercury. As it was not supposed to act in any *specific* manner, its operation was supported by opium, camphor, wine, bark, the warm bath, and blisters, according to circumstances. The principles, however, were not always correctly applied. Nor does it seem to be any valid objection, that a knowledge of their application is not intuitive.

of the rule of practice, founded upon this fact. First, to draw blood, to have afterwards the pleasure of introducing more opium, or mercury into the system, than could otherwise have been done; to debilitate, in order to strengthen; to accommodate the patient's habit to the quantity of medicine that is to be given, rather than proportion the quantity of medicine to the state of the patient; these are rules so wonderfully sublime, that they can never be sufficiently admired! If it were permitted, upon such subjects to reason in a plain way, I would ask, if a patient's excitement be five degrees below the healthy standard, how can any rational being think of lowering it five degrees more, that he may afterwards raise it, with the greater safety? He will then require to apply double the force, that would at first have been sufficient.

---

### CASE VIII.

*Chronic Diarrhœa, accompanied by Hectic, cured by Mercury, and the warm Bath, in 1791, at Sea.*

THE Journal goes on to observe, that “mercury  
 “affects the mouth much sooner, when opium,  
 “blisters, the warm bath, or any other of the  
 “more powerful stimuli are used at the same time.

“ In the Case of William Kirk, the additional  
 “ stimulus of the warm bath speedily accomplish-  
 “ ed what opium, mercury, and wine did not  
 “ effect for a fortnight.”

This patient had the usual symptoms of chronic diarrhœa, with a considerable degree of hectic fever, emaciation, and entire loss of appetite. Externally he used mercury, and internally opium and wine, according to circumstances. It was found necessary to alternate these stimuli with others, such as blisters and the warm bath. He used to remain a quarter of an hour in the bath, heated to as great a degree as he could easily bear. It was not tried, until after he had been a fortnight using mercury. After having used it twice, his mouth became sore. There was an increased flow of saliva, and he recovered in a very short space of time, to the great surprize of all who saw him; and, I confess, contrary to my own expectations. It now, however, appears, as a Case of disease by no means dangerous, if treated in a manner, but distantly approaching to the exactness of scientific principles.

The following remarks are in prosecution of the same subject: “ In June 1791, we had from thirty  
 “ to forty soldiers, ill of fevers, catarrhs, and rheu-  
 “ matisms, and many more with various trifling ail-  
 “ ments, whose cases were not entered in the Jour-



“nal. The similarity of their diseases and treatment, rendered it unnecessary to record any, excepting the most dangerous. In every Case in which mercury was given, so as to produce salivation, the pulse rose, and all complaints gave way, as soon as the mouth was thoroughly affected. But in some Cases, that was found very difficult to accomplish; and in others, I was afraid, although perhaps without just grounds, to push the medicine to a great extent, particularly in diarrhœa and dysentery.”

This groundless apprehension, arose from a knowledge of the purging effects that succeeded the use of calomel, and other mercurial preparations; and from erroneously supposing that a medicine, which, exhibited in one way, produces purging, cannot, if exhibited in another way, cure diseases, of which purging is the principal symptom. But farther reflection and experience soon banished this remnant of scholastic prejudice. (See the Cases of Dysentery.)

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The two following Cases are also extracted from the Medical Journal of the Northumberland East Indiaman, of which ship I was Surgeon, in 1791 2.

## CASE IX.

*Hectic, with incipient Consumption, cured principally by Opium, in 1791.*

MR. N——, Cadet, aged 17,—tall, of a slender make, and consumptive habit; June 13th, 1791, he had, since the commencement of the voyage, in April 1791, been much indisposed with seasickness; for the last ten days, had feverish symptoms, and for two days a diarrhœa; his skin was hot and dry, tongue foul and parched, pulse quick and small. He was ordered to take two table spoonsful every hour of a mixture, consisting of a hundred drops of tincture of opium, and one pint of water, with an ounce of cinnamon water. In the evening, there was a remission of the diarrhœa; but it returned on the 14th, the mixture having been discontinued in the night<sup>1</sup>. One grain of opium was ordered to be taken every hour.—15th, after having taken five pills, his skin became moist, his pulse full, he fell asleep (about 8 o'clock P. M.), and continued free from diarrhœa all night. He had perspired profusely, and his tongue and lips were less parched; having com-

<sup>1</sup> This subduction was improper. In every case, as well as in this, it will be found detrimental,

plained of thirst, he was ordered wine and water for drink.—16th, the opium having been injudiciously discontinued on the 15th, all his symptoms returned; his tongue was foul and parched, his pulse quick and small, his skin hot and dry; he was considerably purged, and had much thirst; one grain of opium was ordered to be taken every hour. On the 17th, the pills having been again imprudently discontinued in the night, he appeared rather confused, his strength was much exhausted, and his complaints remained the same. The pills were ordered to be repeated, and continued through the night<sup>1</sup>. He was allowed mutton or chicken broth, and sago alternately, as his fancy directed; and wine and water for drink.—18th, the pills were regularly taken, day and night, excepting in the intervals of sleep; his pulse was slower and more full; and he was in other respects better, but weak; his skin was covered with a healthy moisture; he complained of some sore-

<sup>1</sup> The confusion of head, and other bad symptoms, which frequently follow the exhibition of opium, are, as I have uniformly observed, owing to the medicine not being repeated at proper intervals. In every case, which requires so high a stimulant power as that of opium, the exhibition of the doses should be regulated by principle. They ought to be repeated in the night, as well as in the day. But the difficulty of doing this, which may arise from the ignorance or carelessness of practitioners, the prejudices or obstinacy of patients, or the negligence of attendants, has often occasioned bad consequences, which have been erroneously imputed to the opium.



ness of his mouth and throat ; he had eat some biscuit, soaked in tea, for breakfast, and was ordered sago for dinner and supper ; the pills were continued.—19th, his pulse was stronger, an eruption appeared on his face, such as often happens after taking opium or mercury. He complained that his mouth was very sore, and was ordered to have a gargle ; the pills, &c. were continued as before.—20th, he was better, the pills, sago, &c. were regularly taken, and he drank plentifully of wine and water ; his thirst was diminished ; the pills and regimen were ordered to be continued as before.—21st, he was stronger, and declared himself in every respect better ; the only complaints that remained were a soreness of the mouth and fauces, and some swelling of the face ; the pills, &c. were continued.—22d, soreness of the mouth and throat were troublesome ; he spit more freely than usual, the increased flow of saliva somewhat resembling that which takes place after the use of mercury<sup>1</sup>. He appeared in other respects so much better, that the pills were discontinued<sup>2</sup>.—23d, he had slept tolerably ; but his skin was hot, and

<sup>1</sup> I cannot say, at this distance of time, whether there was any ulceration of the gums, having omitted to notice it in the Journal.

<sup>2</sup> This is the third error that was committed in the treatment of this case, in suddenly withdrawing a stimulus, to which the patient had been for some time accustomed, and before health was completely re established.

he complained of debility. No medicines were prescribed.—24th, slept ill, and was much harassed with a cough and spitting; his pulse was quick and irregular, and he was oppressed with clammy sweats; half a grain of opium was prescribed every half hour, and bark in wine was given in the intervals. Regimen as before. From that period to the 27th, his medicines were punctually administered; his cough, spitting, and clammy sweats were diminished; his pulse, skin, and tongue were nearly in a healthy state; and the diarrhœa entirely stopped.—28th, he was stronger, had a good appetite, and could sit up; his medicines, &c. were continued. After this it was thought unnecessary to make daily reports in the Journal. His medicines were continued for some days, and gradually left off as he approached the healthy state.

In the above case, the medicines were regularly given, either by a friend of the patient's who took a particular interest in his welfare, by Mr. RIDGES, then surgeon's mate of the Northumberland, or by myself. The relapses which always took place, upon suddenly laying the medicines aside, or withholding them even for a night, shew the necessity of repeating the doses, with the utmost regularity and care. The soreness of the mouth, together with the increased flow of saliva, after the use of opium, was not a peculiar cir-

cumstance. Upon that subject, the following remark appears in my Journal:—" In many cases, " in which opium was freely given, for a length " of time, a considerable increase in the flow of " saliva, was observed to take place, and to conti- " nue long after the medicine was laid aside. " But in cases, where a considerable spitting " had before existed, opium as well as mercury " had the effect of lessening it." These facts, with the explanation of them, will be considered in another place.

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## CASE X.

*Remarkable Fall, with Contusion or Concussion, treated successfully according to the Principles of the Doctrine of Excitation, in 1791, at Sea.*

ENSIGN G——, 36th regiment, a stout, healthy man, about 25 years of age, went up, in a fit of playfulness, to the main-top-mast-head, on the evening of the 10th of June, 1791. After having remained there a short time, he fell asleep upon the cross-trees, and about midnight fell down upon the quarter-deck. In the fall, he first struck with his hip, as was supposed, against an iron sturncheon in the main-top, which bent ; he then came upon



the mizen-stay, which took him, as far as could be collected from the confused intelligence of some people upon deck, about the middle of the abdomen ; and from the stay he fell upon the quarter-deck. He was, as may well be supposed, entirely insensible ; much blood was discharged from his mouth, nose, ears, and even from his eyes ; in this state he was carried down to his cabin ; upon examination, no fracture was found ; the whole consequences of the fall seemed to consist of contusions or concussion, the marks of which were very general over his body. His pulse was small, but regular. There happened to be in the ship four professional gentlemen, besides myself. They all seemed of opinion, that Mr. G. should immediately lose blood. Some of them insisted upon it, with much earnestness ; and the by-standers, knowing that to be the common practice, joined in urging a compliance. I replied that however common the practice might be, I was convinced of its being entirely wrong ; and that I would not, even with the sanction of a majority, do what I was certain must endanger the life of my patient. But that if any of the gentlemen present, chose to take charge of Mr. G——, they might have an opportunity of bleeding him, with propriety, if convinced in their conscience that it was right ; and I would give them my opinion when asked. This offer was not accepted. Mr. G. was not bled. In the course of two hours from the acci-

dent, he became sensible; was sick at stomach, and vomited. This, as a symptom of concussion usually enumerated, would farther indicate, according to the hypotheses of the schools, and the practice of hospitals, copious blood-letting. That, however, did not alter my plan. I was aware indeed that, if the patient died, his death would be attributed to the non-observance of customary forms. But I was also persuaded that, if he lived, after having been copiously bled, it would be in spite of the blood-letting. He was my friend, as well as my patient; and in defiance of obloquy, I determined to do what appeared to me best, in order to save his life. Externally the most powerful stimulating substances were applied, in concourse or succession. For four days he could not move in bed, without excruciating pain. He had small opiates occasionally, wine, and nourishing food; and once half an ounce of sal catharticus amarus, so as to produce one stool. Nothing more was done. He had not an unfavourable symptom. The pains gradually abated; and on the eighth day, from the fall, he was carried upon deck in a chair.

That there was absolutely a considerable degree of concussion in this case, appears from his having wholly lost the sight of one eye, although, when the marks of contusion had disappeared from the side of his face, the eye looked almost as well

as the other. He complained at times of head-ach, which was always relieved by wrapping up his head in warm clothes.

The issue of this, as well as of every other case of contusion, or concussion, which I have seen treated, either in or out of hospitals, convinced me, that blood-letting is not only unnecessary, but pernicious.

I shall give one extract more, from the observations upon this subject, (the application of mercury for the cure of diseases) made on board the Northumberland, in April, 1792. “ In every case  
“ of low fever, which occurred among the sol-  
“ diers, on the passage to India, from the mo-  
“ ment the mouth was affected <sup>1</sup>, a recovery com-  
“ menced. But as the mercury was used exter-

<sup>1</sup> By affection of the mouth, is meant an increased flow of saliva. When a free and increased flow of saliva takes place, such as constitutes salivation, a recovery will always ensue, if the succeeding treatment be right. But the mouth, gums, fauces, and tongue may be ulcerated, without an increased flow of saliva being produced. In those cases, many facts authorise the conclusion, that no recovery will take place. Internal local disease, of the thoracic or abdominal viscera, or both, will be found upon dissection. These appearances have been so uniform, in many cases which I have opened, that I can now venture nearly to predict, in what state the viscera will be found, where the mouth cannot be affected, so as to produce an increased flow of saliva.



“ nally only ; and as, in some cases, the mouth  
 “ could not, in that manner, be affected (which  
 “ cases never terminated favourably) might not  
 “ the internal use of that medicine prove more  
 “ effectual ? And would it not be advisable to ex-  
 “ hibit it, in small doses, frequently repeated,  
 “ until the desired effect is produced ?”

As the foregoing observations were not originally designed for publication, it was found impossible to copy them literally from the Journal. In many places, therefore, words are altered to render them less unfit for publication ; but no alteration is any where made in the sense.

From that period, my confidence in the powers of mercury, for the cure of all diseases of indirect debility, became so decided, that I determined to apply it in every case, in which the ideas of my patients would admit of the practice, even in diarrhœas, and dysentery, the diseases in which the theory seemed most difficult of reconciliation. With respect to the diseases that were considered as depending upon a state of excessive excitement, although I much doubted the existence of such a state, yet my ideas were by no means sufficiently clear in regard to it. An opportunity having soon occurred of putting it to the test of experiment, in my own person, it was eagerly embraced.

## CASE XI.

*Inflammatory Fever, so called, (from Coup-de-Soleil) or Synocha of the Nosologists, cured by Mercury and Opium, in 1793, at Calcutta.*

IN September, 1793, after having been exposed a whole day to the heat of the sun, in an open boat, upon the river Hooghly, I was seized, in the evening, with symptoms of high fever. According to the common practice, I should immediately have lost blood, taken an emetic, or purgative, and abstracted, as far as possible, all the usual and ordinary stimuli. Instead of that, a pill, consisting of one grain of opium and one grain of calomel, was taken every hour, through the night. By this means, the excitement was sufficiently supported, and I remained easy, with an abatement of all the febrile symptoms. On the following morning, a considerable stiffness, swelling, and pain, affected my left arm, from the shoulder downwards; and it had assumed a kind of livid appearance, rather alarming. This arm, from the situation in which I stood in the boat, had been more exposed to the direct rays of the sun, than any other part of my body. It was bathed with tincture of opium, and rubbed with mercurial ointment alternately; and the pills were continued.

After having taken about thirty pills, my arm began to return to its usual state, and all the other symptoms disappeared. The pills were omitted ; and I found myself quite well. From eight to twelve hours, however, after the pills were omitted, my mouth, all at once, became very sore. A discharge of blood from the fauces and gums soon commenced, which continued troublesome for two days, and ended in salivation. Had I then adverted to the fact, that a sore mouth and salivation are not produced by a regular exhibition of mercury, but by the irregular exhibition, or sudden subduction of it, these troublesome and disagreeable symptoms might easily have been avoided ; or if, by neglect, they had been allowed to occur, they might as readily have been cured. The fever did not return ; and I was soon restored to health. This fever, after a bleeding or two, would most probably have assumed the appearance of peripneumony, which, according to the medical hypotheses of the schools, would have indicated still farther bleeding, and other evacuations. And there is little doubt that, under such treatment, it would have terminated, at the best, as so many cases of acute disease do, in this country, (India) in adhesions of membranes, local affections of the viscera, or a very lingering recovery<sup>1</sup>. But let

<sup>1</sup> In consequence of a conversation that took place, after writing this treatise, the following note, extracted from the



me not be misunderstood. It is the bleeding alone which I condemn in so unqualified a manner. The cathartics, sudorifics, &c. employed in these diseases, although by no means given with the proper view, and therefore seldom given in a proper manner, are upon the whole, productive of more good than harm. Their effect is always to increase excitement, and the state of indirect debility, which succeeds their operation, constituting purging, sweating, &c. arises from their not being repeated afterwards in such a regular manner, as to produce the highest excitement.

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Soon after this period, an opportunity occurred of giving mercury a very fair trial, in diarrhœa and dysentery, almost the only diseases in which I had not yet ventured to apply it. Early in the year 1794, I was on board the English

9th Volume of the Edinburgh Medical Commentaries, was sent to me. “ Dr. Robert Hamilton, of Lynne Regis, on  
 “ eighteen years experience, recommends mercury, joined  
 “ with opium, in inflammation of the liver, peripneumony  
 “ (even in women far advanced in pregnancy) inflammatory  
 “ gout, wounds of the head, thorax, abdomen; from one  
 “ to five grains of calomel, and from one-fourth to one grain  
 “ of opium, every six, eight, or twelve hours.” This most excellent practice was, in all probability opposed at the time, in order to support some ridiculous hypotheses of the Schools.

East India Company's ship *Houghton*, composing part of a squadron on a cruise against the French, and designed for the protection of Batavia. The crew of the *Houghton*, in consequence of the ship's having been ill manned, some peculiarities in the internal economy, and having been stationed, at the port of Batavia, a month longer than the other ships, suffered much from sickness. A very great proportion of the seamen were seized with diarrhœas, fevers, and dysenteries, the severest that I had ever seen. The European soldiers and lascars<sup>2</sup>, being subject to different regulations, enjoyed a tolerable exemption from disease. Upon this occasion, the inefficacy of the treatment, recommended by authors and teachers, in severe cases of dysentery, struck me in the most forcible manner. The usual doses of medicines produced no perceptible effect. In this dilemma, it was determined, as had been successfully practised upon other occasions, “ to use  
 “ opium, camphor, mercury, and other stimuli,  
 “ both internally and externally, until the disease  
 “ was cured, or a salivation produced. In every  
 “ case, in which the mouth was affected, a reco-  
 “ covery with certainty ensued<sup>3</sup>. Blisters and

<sup>2</sup> We had on board a company of European infantry, and a company of gun-lascars from Bengal.

<sup>3</sup> But in those cases, in which the mouth could not be affected, so as to produce an increased flow of saliva, not one

“ wine were used, with great advantage, as auxiliaries.” These remarks are taken, with some trifling alteration in the language, from a copy of the Medical Journal, kept on board the Houghton, in 1793 and 1794, of which ship I was then surgeon.

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## CASE XII.

*Typhus, cured by Mercury and Opium, in Bengal, in 1796.*

WILLIAM HOLLOWAY, aged 22, was admitted into the General Hospital, at Calcutta, on the 3d of September, 1796, with symptoms of typhus fever, of several days standing. At bed time, he took two grains of opium, and six grains of calomel.—4th, he had slept a little ; his tongue was parched and black ; pulse 96 ; he had two stools on the 3d. Six grains of calomel, and six

recovered. This remark was omitted in the Journal, having been supposed to follow as a necessary conclusion from the other. But as, upon a more attentive consideration, that does not appear to be the case, it is proper that both circumstances should be explicitly stated. I was sometimes deceived by an appearance of soreness of the mouth, and left off the medicine prematurely.



grains of powder of jalap, were ordered to be given every four hours.—5th, in addition to his former symptoms, he complained of cough and pain of breast. He had only one stool, since he began to take the powders. The powders were ordered to be repeated, and a draught, with sixty drops of tincture of opium, to be given at bed time —Nine o'clock, P. M. he had not yet taken the draught prescribed for him in the morning; the pain of his breast was more severe; he had no stool for twenty-four hours; was ordered a glyster with one ounce of castor oil, and one ounce of Glauber's salts; and afterwards to take the draught.—6th, he had no stool from the glyster. His pulse was 116; his tongue furred and black, and his mouth exceedingly parched; he was a little confused, and had a slight degree of sub-sultus tendinum. Two ounces of the common infusion of senna was ordered every hour, and a glyster, double the strength of the former, every second hour, until he should have a stool or two — Seven o'clock P. M. he had one copious stool, after having taken several doses of the infusion, and two or three glysters. Four grains of opium and four grains of calomel were ordered to be taken at eight o'clock, and to be repeated at twelve. —On the 7th, he conceived himself better; pulse 108; his tongue was still furred and skin hot. He was allowed twelve glasses of wine in the day. Ten grains of calomel, and fifteen grains of

powder of jalap, were prescribed every four hours. —Nine o'clock, P.M. his skin was very hot, pulse only 100; he had taken three of the powders, and had three stools; he complained that his tongue was sore. It was still furred, and black in the middle. He was ordered a draught, with a hundred drops of tincture of opium, at eight o'clock, and again at twelve.—8th, his pulse was 100, and heat of skin more moderate; but his tongue remained foul; he expressed a wish for porter<sup>4</sup>. A bottle of porter was allowed him, and the wine was continued. The powders and draughts were repeated.—9th, he remained nearly in the same state; but complained of a severe cough. He had two stools. All his medicines were continued as the day before.—10th, he had no cough, and rested well; his pulse was 112; he had no stool; two ounces of infusion of senna were ordered to be taken every hour through the day, and the draughts to be repeated at night.—11th, his pulse was 116, tongue very foul, and mouth parched; he had slept but little; and had no stool since the 9th.—A glyster, with two ounces of castor oil and two ounces of Glauber's salts, were ordered to be given immediately, and to be repeated according to circumstances. The powders were given as

<sup>4</sup> The desire for beer or porter, is a symptom that frequently occurs, when the mouth begins to be affected, after having used mercury.

before.—Seven o'clock, P. M. his pulse was only 100; tongue cleaner, and moist,—He had one stool after having taken two glysters. He remarked that he had, for the first time, a distinct paroxysm of fever in the afternoon. The draughts were given as usual.—12th, his pulse was 92, and his skin nearly of a healthy temperature; his tongue remained a little furred; he had no stool. The glysters, powders, and draughts were directed to be given in the same manner as the day before.—13th, when I visited him, he was sound asleep, seemed easy, and his skin cool. The medicines were ordered to be continued. Seven o'clock, P. M. his pulse was 76; skin moist and cool; he had two stools, and was inclined to sleep. The draughts were continued.—14th, he was not so well as the day before; his pulse was 96 in the morning, and 92 in the evening, and his tongue rather foul. The medicines were continued. On the 15th, his skin, tongue, and pulse approached nearly to the healthy standard. He expressed a desire to eat, and was ordered to have chicken broth. The powders and draughts were continued. On the 16th, he had no feverish symptom, his tongue was sore at the edges, and there was an increased flow of saliva. The powders were omitted, and the draughts continued. From that period, he was convalescent, and only took one draught occasionally at night. On the 23d, he was free from complaint, and discharged from the



Hospital.—During the whole of the time, he was allowed wine and porter, as at first prescribed.

This case is not given as an uncommon one, either in respect to the violence of the disease, or the quantity of medicines that were prescribed. The history of it shews, that the sum of stimulant power first applied, was inadequate to effect a cure, even in a case of slight disease; for the symptoms by no means approached to the severity of typhus gravior. In every fever, whatever be its nosological description, the same plan would have been pursued, increasing or diminishing the force of the exciting powers, in proportion to the degree of indirect debility. If such a quantity, as was used here, be necessary for the cure of mild typhus, what powerful stimuli must often be required in typhus gravior, dysentery, or plague?

The intervals, I think, at which the medicines were repeated, are too long. The duration of the action of each dose of mercury or jalap is not, perhaps, near so much as four hours; probably not more than one. But whatever it be, such is the period exactly, at which doses ought to be repeated.

In this, as well as in many cases, both of dysentery and fever, I have given castor oil, jalap, and other cathartics, with a view simply to increase

the excitement. In so far as they effect that, and thereby invigorate the functions of life, they are proportionally as useful as opium, æther, mercury, brandy, wine, or bark. But the purging I conceive to be proportionally as injurious a consequence, and as much a mark of indirect debility, as the head-ach, sickness, and vomiting, which follow an excessive or irregular use of these substances. This subject is considered at greater length elsewhere.

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### CASE XIII.

*Typhus, with Local Affection, cured by Mercury and Opium, in Bengal, in 1796.*

JOHN BROWN, aged 28, was admitted into the General Hospital, at Calcutta, on the 10th of July, 1796, with typhus fever. He had besides a sore leg and chancres. His fever, although apparently slight, was very obstinate. In the course of two months, he was several times almost cured, by small and frequently repeated quantities of opium, mercury, wine, and bark, varied according to circumstances. But, seemingly in consequence of internal local affection, he as often relapsed, without any apparent cause. His fever, from

continued became remittent, and from remittent intermittent. On the 24th of September, suspecting the existence of local disease, I represented to him the necessity of undergoing such a course of mercury as to affect his mouth, to which he had hitherto expressed an insuperable aversion. He had, for some days previously, taken calomel in small doses; and had latterly two emetics at his own request<sup>1</sup>. On that day, he was ordered to take ten grains of calomel, and fifteen grains of jalap every four hours.—25th, he had taken three powders in the course of the day, and was excessively purged and griped through the

<sup>1</sup> That tartar emetic is a stimulant of very high power is evident from the small quantity of it, which produces the state of indirect debility, that occasions vomiting. It should be given in such a manner, as to increase and to support the excitement. But this will be found difficult, as the duration of its action seems to be even shorter than that of opium. If its action does not continue more than a quarter of an hour, might it not be repeated at such short intervals, and the doses so gradually reduced, as not to allow the establishment of indirect debility? If, when given at such a random rate, as to produce vomiting, and the most disagreeable sensations that can be imagined, medicines sometimes produce good effects, how much more useful must they be, when given according to just principles? The prejudices of patients may sometimes be turned to their advantage by judiciously alternating stimuli, so as to humour their whims. The medical prejudices of the vulgar are generally dictated by those of physicians. At present they are as unreasonably in favour of tartar emetic, as they are against opium.



night<sup>1</sup>. He had no fever. Two grains of opium and four grains of calomel were directed to be taken every three hours, through the day, and four grains of each at bed time.—26th, the same plan was continued; and he had no return of fever.—27th, he had no fever, and his mouth was very sore. The pills were ordered to be given every six hours.—28th, his head, face, tongue, and throat, were much swelled; he had a considerable discharge of blood from the mouth and fauces, and some purging. In this case, the medicines were by no means correctly exhibited. But it is probable also, that they were not regularly taken. Salivation, or, in cases of local disease, where salivation cannot be produced, a discharge of blood from the mouth and fauces, does not take place, while the mercury is regularly taken, but when it is either suddenly laid aside, or given at improper intervals. The following mixture was prescribed: tincture of opium three hundred drops; water one pint; peppermint water and sugar, as much as will make the mixture agreeable; an ounce of it to be taken

<sup>2</sup> This is one of many facts that prove purging to be the effect of a state of indirect debility, occasioned by the improper subduction of stimulant powers. Had the powders been regularly repeated in the night, the purging and griping would not have taken place. This I have observed so repeatedly with respect to calomel, that I have no hesitation in asserting it to be an undoubted fact.

every hour. The pills were omitted. On the 29th and 30th, he continued the mixture; his mouth was better; he had no fever, and but little purging; and his pulse was 86.—October the 1st, his pulse was 76, and of good strength; his mouth was much better; and he had no return of fever. The tincture of opium was diminished to two hundred drops. From that period he recovered strength, and had no return of fever. The mixture was gradually decreased in strength and discontinued. On the 16th of October, he was discharged, apparently well.

There are several inferences to be drawn from this case. The obstinacy of the fever convinced me, that it depended upon local disease, and determined me to give mercury in large doses. The discharge of blood from the mouth and fauces, without a previous increased flow of saliva, was an additional proof of the existence of internal local affection. And, although this patient left the Hospital apparently well, I am convinced, from the circumstances mentioned, as well as from an irregularity of his bowels, that his abdominal viscera were in a diseased state, and that his exemption from general disease was merely temporary. From these observations, I would not be understood to infer, that mercury acts as a *specific* in removing local disease; but that, by supporting the excitement of the whole body, it

invigorates each particular part, and thus occasions, to a certain extent, the regeneration of those organs, which may have been injured by the disease.

This is not the only instance, in which the good effects of opium have been experienced, where an excessive salivation, or a discharge of blood from the fauces, after the use of mercury had taken place. As these symptoms happen from too sudden a subduction, or an irregular repetition of the mercury ; so they may be either obviated or removed, by a proper application of the same power. But as the prejudices of patients will seldom admit of a continuance of the medicine, in these cases, it is absolutely necessary to substitute some other stimulant power, equivalent in force. Those which I have found to answer best, are opium, blisters, and the warm bath. Other stimuli, justly proportioned, might no doubt answer equally well. But from the endless hypotheses of the art, no successful attempts have yet been made to ascertain their relative powers. This is a discovery, which, however distant, I am yet sanguine enough to expect. For, in the medical as in the moral world, attachment to principles instead of persons, may be expected to increase, with the progress of knowledge



## CASE XIV.

*Anomalous Affection, with remarkable Slowness of Pulse, &c. cured with Mercury and Opium, in Bengal, in 1796.*

HENRY DOLLAWAL, aged 26, was admitted into the General Hospital, on the evening of the 22d of October, 1796. He had for a fortnight before, complained of headach, pain of loins, hoarseness, and cough, &c. pulse 58. He was ordered to take two grains of opium and four grains of calomel, at 9 o'clock, P. M. and again at twelve. On the 23d, he was somewhat easier. Pulse as before. He had no stool. One grain of opium and three grains of calomel, were given every three hours; and several glysters of castor oil.—9 o'clock P. M. he had one stool. The opium and calomel were desired to be repeated as the night before. Pulse 64.—24th, he thought himself better; but his cough continued severe. Pulse 56. He was desired to take four grains of calomel every three hours.—Nine o'clock P. M. he was not sensible that the pills produced any effect. Four grains of opium and ten grains of calomel were ordered to be taken immediately, and repeated at twelve o'clock.—25th, he was seized in the morning with violent spasms. Pulse 64. He was put into the warm bath, which was ordered to be re-

peated according to circumstances. Afterwards, two grains of opium and four grains of calomel were directed to be taken every two hours, day and night.—26th, he was much better, and had no cough. The pills were continued.—27th, he thought himself better. His pulse beat only 44 strokes in the minute. The pills were repeated every three hours.—28th, his mouth was gently affected. Two grains of opium, and two grains of calomel were given every three hours.—29th, he was in every respect better, had some slight spitting, and felt a returning appetite. Pulse 68.—One grain of opium and one grain of calomel were given every four hours.—On the 30th, he was discharged well.

An uncommonly flushed countenance, and what is called a plethoric habit, together with an unusual slowness of pulse, hoarseness, cough, and pains, would have indicated according to the common practice, blood-letting and other evacuations, in this case. The powers however, by which a cure was effected, prove, that these symptoms depended upon a state of indirect debility; and that the use of debilitating powers would have been improper. For the same reason it may be inferred, that a peculiar slowness, as well as a quickness of the pulse sometimes takes place in a state of indirect debility. Every departure of the pulse from the healthy standard, whether in quickness

or slowness, depends upon debility; as well as every deviation from health, in any of the other functions. Costiveness, as well as purging, depends upon debility of the intestinal canal. This is shewn from patients affected with the same disease having, in some cases, a quickness, in others, a slowness of pulse; in some cases purging, in others costiveness; and all of them being cured by the same means. It is further corroborated by the proof, that such a state as that of excessive excitement, cannot take place. As blood-letting is the abstraction of a high stimulant power, it must be shewn that diseases of excessive excitement exist, before it can be admitted as a remedy. Or if it be contended that blood-letting is useful in diseases of debility, it must be shewn that it acts as a stimulant power. Mere assertions that it has been found useful, do not amount to a sufficient refutation of this reasoning.

There was an error of some importance in the treatment of this case, which affords the most convincing proof of the necessity of repeating the doses of medicines, at certain regular intervals, and by a certain rule. On the morning of the 25th, after having taken four grains of opium and ten grains of calomel, at nine and at twelve o'clock, the preceding night, the patient was seized with violent griping and spasms. This symptom, as I have had frequent opportunities of observing, was undoubtedly owing to the doses not having



been repeated at proper intervals. If a dose of equal strength, or one somewhat smaller, had been given at three, and another still smaller at six o'clock in the morning, the state of indirect debility, constituting spasm, would not have taken place. As these symptoms may be occasioned, or prevented, at pleasure, the fact is incontrovertible. In this case, they immediately yielded to the stimulant power of the warm bath, another proof that they arose from a state of indirect debility, occasioned by a deficient frequency or force, in the application of stimulant powers. Opium, calomel, camphor, æther, or castor oil, given in just proportions, would have produced the same effect with the warm bath. But external applications may often, with great advantage and conveniency, be alternated, or conjoined, with internal remedies.

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## CASE XV.

*Fatal Peripneumony, with extraordinary Adhesions of the thoracic Viscera, and other Appearances upon Dissection, in 1796, in Bengal.*

ROBERT WILLIAMSON, aged 25, was admitted into the General Hospital at Calcutta, on the 28th of October, with a quick and small pulse,

laborious breathing, pain of back, loins, &c. His face was turgid; and his eyes red and starting. His tongue was foul and furred. He reported that he had been attacked with fever, seven or eight days before, which had become more severe, and continued for the last two days. Some medicines had been taken before he came into the Hospital.—At three o'clock P. M. when I first saw him, ten grains of calomel were ordered to be taken every three hours. At ten P. M. his pulse was 112, and his breathing exceedingly laborious. A scruple of calomel was ordered to be given immediately, and to be repeated at one o'clock A. M. A blister was applied to his sternum. On the 29th of October, his pulse was 120, with burning heat of skin. His tongue felt like a rough board. He had one small stool in the morning. Ten grains of calomel were ordered to be repeated every three hours. At nine o'clock P. M. his pulse was 124. He had one stool<sup>1</sup>; his breathing was laborious, his eyes starting, and he seemed in all other respects worse. Three grains of opium and twelve grains of calomel

<sup>1</sup> In this case the medicine seemed to produce but a very small effect. If to supply the waste of the excitability be the proper function of the lungs, it is evident that, after a certain degree of organic lesion has taken place, it cannot be recruited. But stimuli are not therefore to be withheld. For, by such a treatment, the excitability must be still farther exhausted.

were desired to be given immediately, and repeated at twelve o'clock. October the 30th, he died at four o'clock, A. M.

Upon dissection, the thoracic viscera were found adhering to each other, in such a manner as to form but one mass. The lungs adhered to the pleuræ, mediastinum, and diaphragm; the heart to the pericardium; and the pericardium to all the surrounding parts. The adhesions were remarkably strong as well as general. The lungs were of a darker blue than usual. Upon a general view of the abdominal viscera, they appeared to be sound. The scrotum was gangrenous. In one of the arms, there was the mark of a recent incision made by a lancet.

This was undoubtedly a case of the most violent peripneumony. According to the common practice, the patient would have been repeatedly bled. Would the abstraction of blood have produced a resolution of the adhesions, which were found in the thorax? The greatest partizan of the practice, I think, would scarcely affirm it. According to the confused notions entertained of peripneumony being a disease of excessive excitement, it becomes necessary, in order to preserve some appearance of consistency, to divide the disease into different stages; and to use a different or even an opposite plan of treatment, in



each. Is it possible that any disease can vary in its progress, excepting in degree? And if not, ought the powers applied for the cure to be varied, in the progress of any disease, excepting in their degree of force? These would appear to be the conclusions of reason and common sense. But to overturn such flimsy arguments, come in medical hypotheses, and say “inflammation we *suppose* arises from an increased impetus of the blood in the part affected, and is *therefore* to be cured by diminishing the quantity of that blood. In peripneumony, there is an inflammation of the lungs; and in order to cure the disease, the impetus of the blood in the lungs must be lessened by blood-letting.” To this curious fabric of reasoning, I will just oppose a single fact. There is not an inflammation, with which we are acquainted, that is not to be cured (as far as it is curable) by the application of stimulant powers, as warm fomentations, tincture of opium, tincture of cantharides, camphorated spirits, æther, volatile alkali, and mercury. If any person seriously doubts the fact, it will be an easy matter to submit it to the test of experiment. And if there be any other reason, for persevering in the practice of blood-letting, than because it is derived from the hypotheses of the schools, and is conformable to custom, let it be produced. That blood-letting had been used, in this case, previous to the patient’s having been

sent into the hospital, appears probable from the incision in his arm: that he was purged is known. As cathartics, however produce an increased degree of excitement, before the debilitating operation of purging succeeds, their stimulant effects will often more than counterbalance the indirectly debilitating effects, which afterwards arise. But as blood-letting is a directly debilitating operation, the abstraction of an ordinary and powerful stimulus, it must always be highly injurious. In diseases of direct debility, as far as they can become subjects of medical treatment, it must add to the accumulation; in those of indirect debility, it must increase the exhaustion<sup>2</sup>. It is upon the supposition alone that some diseases depend upon a state of excessive excitement, that blood-letting can ever be thought admissible. And that such a state does not exist has, in my opinion, been fully proved. I know it will be urged, by individuals, that they have found blood-letting useful. But this, like many other medical facts, is mere assertion, not proof. “ Whatever has been useful in one case, must be “ useful in every similar case of disease. But “ it is not so with blood-letting. It has not in- “ variably been found useful in any one disease. “ We may therefore, I think, fairly conclude “ that it has never been useful in any one case

<sup>2</sup> “ View of the Science of Life,” Prop. XXVI.

“ of disease. If it be said that this is reasoning,  
 “ and that experience; let me be permitted to  
 “ ask whether just reasoning and real experience  
 “ can ever differ? It is impossible. Whatever  
 “ is true in theory, must be right in practice.  
 “ To inculcate a contrary opinion is the grand  
 “ shield of empiricism. Circumstances delivered  
 “ as facts, from the presumed experience of  
 “ individuals, ought never to weigh against prin-  
 “ ciples, which are deduced from numerous and  
 “ undoubted facts, and which can be put to the  
 “ test of experiment by all mankind.

The quantity of calomel given here was large. But after taking two scruples at two doses, and allowing time for the operation of purging from indirect debility to take place, only one scanty stool was produced. This shews clearly, that although the quantity was large in proportion to what is usually given, it was by no means sufficiently large in proportion to the exhaustion of excitability that had taken place; or, in other words, to the violence of the disease. Although it be extremely doubtful, whether the excitability can ever be accumulated to the healthy standard, by any degree of stimulant power, when so many principal organs have become unable to perform their functions; yet it is certain that, in order to give a patient in such circumstances, the only chance of cure, the stimuli should be increased



in power, until they produce some effect. In this case, therefore, the medicines should have been both increased in quantity, and more frequently repeated. But as, in every kind of practice, the prejudices of patients, or carelessness of attendants, will frequently render it impossible strictly to adhere to the application of principles, we can only make such an approach to them, as these, and other circumstances will permit.

Had it not been my wish to bring the theory and practice of this doctrine to the fullest and fairest proof of discussion and experiment, this is one of those cases which I would have suppressed. It is to be regretted that writers do not oftener think it necessary to publish their unsuccessful, as well as their successful cases.

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## CASE XVI.

*Fatal Complication of Dysentery, with Hepatitis, in Bengal, in 1796.*

ROBERT WOODSIDE, aged 25, was admitted into the General Hospital, at Calcutta, on the 24th of October, with a Dysentery of a fortnight's stand-

ing. He had 10 or 12 stools in the day, with blood ; and complained much of head-ache, pain of loins, griping, and tenesmus. He lay easiest on his right side. His pulse was 108 ; and he had frequently a flush in both cheeks. I began by giving him small doses of calomel, frequently repeated ; frictions of mercurial ointment ; and draughts of 70 or 80 drops of tincture of opium, repeated according to circumstances, through the night. In the course of a few days, the calomel was increased to six grains, with two grains of opium, every two hours ; an ounce and a half of ointment was rubbed in at four times, in the course of the day ; and draughts, with two hundred drops of tincture of opium <sup>1</sup> in each, were given, every second hour, during the night. The calomel was occasionally alternated with camphor, and the tincture of opium with æther. Blisters were applied, and clysters of castor oil frequently given. These applications were made in concourse or succession ; and increased or diminished in strength, according to the judgment formed of the state of the excitement, at the time. For a fortnight he seemed to get better ; at one time, the purging rather decreased, and he had no blood in his

<sup>1</sup> Some cases of dysentery will require much more than this quantity. It is to be recollected, however, that the laudanum was weaker, perhaps, one third, than what is commonly used in Europe.

stools. But from his mouth not being affected, so as to produce an increased flow of saliva, after having used an uncommon quantity of mercury ; from frequent sickness and vomiting ; his always lying on the right side ; some degree of silliness and anxiety ; an occasional flush of the cheeks ; and his having no appearance of getting better upon the whole ; I concluded, although there was no apparent enlargement, that his liver was diseased<sup>2</sup>. The medicines, however, were continued, with a view of supporting the excitement, with as much equality as possible. He continued nearly in the same state as at first described, until the 14th of November, when his pulse (which had varied throughout from 64 to 108, with intermissions occasionally) increased in frequency to 120. His tongue became very dry and glossy. On the 15th, together with his other symptoms, he had a severe hiccup, and intermission of the pulse after every 7th or 8th beat. On the 16th the hiccup was severe and incessant ; his pulse 116, and intermittent ; he had no power in his extremities ; and at ten o'clock P. M. he died.

In tedious illnesses, patients naturally get disgusted with their medicines in the course of some

<sup>2</sup> By disease of the liver is meant, that state in which it is incapable of performing its functions, whether it consist in inflammation, suppuration, induration, enlargement, &c.



weeks, or their attendants become negligent. Although both these circumstances happened, in some degree, in this case, the directions were, upon the whole, observed with much punctuality. From the beginning a cure was not expected; for in every similar case, of between twenty and thirty that were opened by myself, and some by Dr. Yates, the appearances of local disease were so much alike, that I can now almost venture to pronounce, from the symptoms, in what state the viscera will be found, upon dissection. In this case, I was so certain the liver was diseased, that it was mentioned in the daily report, some time before his death. Upon dissection, there were found several abscesses in both lobes of the liver, communicating with each other, and containing, in all, about one pound of matter, of a thick consistence and white colour. On the upper surface, there were five or six ulcers, communicating with the abscesses. The edge of the right lobe, a part of the colon in contact with it, and part of the diaphragm, at its origin from the cartilages of the ninth and tenth ribs, were all sphacelated. The intestines, omentum, &c. were adhering throughout.

Are flushed cheeks a symptom common to persons, whose viscera are diseased, whether of the thorax or abdomen? I have frequently observed it in both.

## CASE XVII.

*Dysentery, with increased Size, Weight, and Induration of the Liver, which proved fatal, in Bengal, in 1796.*

THOMAS KELLAN, aged 28, was admitted into the General Hospital, at Calcutta, on the 2d of October, 1796, with dysentery of five weeks standing, accompanied by pain in the region of the liver. He had the usual symptoms of griping, tenesmus, and a discharge of blood; generally lay either upon his right side, or in a sitting position; in the latter of which he found most ease. He was frequently sick, and vomited. His tongue was white and furred; and his pulse 104. Four grains of calomel, and one grain of opium were given every hour. One ounce of mercurial ointment, and half an ounce of calomel were rubbed in. On the 4th, he was easier, and had slept well. His tongue and pulse remained as before. The ointment was ordered to be rubbed in, morning and evening, and the pills to be continued<sup>a</sup>; he was allowed eight glasses of wine in the twenty-four

<sup>a</sup> In the commencement of this case, two mistakes were made: one in not giving draughts at night, and the other in not rubbing the ointment at shorter intervals.

hours<sup>2</sup>. Eight o'clock P. M. he had slept much during the day ; pulse 120 ; he was in other respects much as before.—5th, his pulse was 120, and he complained of weakness. He had six or seven stools, without blood ; and was much inclined to doze. He complained of considerable pain, and burning sensations, in the region of the liver. A blister was ordered to be applied ; and two grains of opium, with eight grains of calomel, to be given every hour. He was allowed twenty glasses of wine in the twenty-four hours.—6th, he had taken ten doses of the opium and calomel. Was much vomited and purged, and had some degree of fever during the night<sup>3</sup> ; but was then better. Pulse 108. The pain in the region of the liver was somewhat relieved. A pill of one grain of opium and four of calomel was ordered to be taken every hour ; a draught, with one hundred and fifty drops of tincture of opium, to be given at eight o'clock P. M. ; and to be repeated at twelve. The ointment was continued.—7th, he slept well, and had only two stools. Had taken seven pills, and the draughts ; pulse 100. The

<sup>2</sup> This quantity was by far too little. In a case like this, a wine glassful every hour, would not have been too much.

<sup>3</sup> In consequence of the irregular exhibition of the pills. This frequently happens, when pills are given in the day, and discontinued at night : or where draughts are not given at night, in lieu of them.



pills, ointment, and draughts, were continued.—8th, he was considerably better ; had five or six stools. He had taken eleven pills, and the draughts. The pills, ointment, and the draughts reduced to 100 drops, were continued.—9th, he had taken ten pills, and one draught ; had some stools yesterday, but none last night. Pulse 100 : no sickness. The medicines were continued.—10th, having begun to get indifferent about taking his medicines, they were varied, in order to humour him. Instead of the pills, a mixture, consisting of half an ounce of tincture of opium, and one pint of water, was given, in divided portions, in the day. This was again alternated with pills. Blisters were repeatedly applied, and the draughts were continued ; but the pain and burning sensations over all his abdomen, sickness, and vomiting ; frequency of stools with blood ; smallness of the pulse, &c. seemed to be rather increasing. On the 14th, the tincture of opium in the mixture was increased to an ounce and a half, to one pound of water, of which he was ordered to take an ounce every half hour ; the ointment was omitted, and the draughts continued. On the 15th, he said that he had been easier the day before ; but having become irregular in taking his draughts, he was frequently purged and griped at night. From that period till the 23d, the opium and calomel, from two to

four grains of the one, and from six to ten grains of the other, were alternated with the mixture ; the ointment was rubbed in occasionally ; and the draughts, with from 60 to 100 drops of tincture of opium were given at night, or 3 or 4 grains of opium, whichever he seemed inclined to prefer. From the 23d of October, to the 18th of November, he appeared to be so much better, that, although confident of the existence of much internal local disease, I was not without hopes, that it was of such a degree as to admit of a reproduction of parts. His pulse varied from 80 to 96. The doses of medicines were considerably diminished. Camphor, four grains every two hours, was alternated occasionally with the calomel and opium. Glysters, with one ounce of castor oil, were sometimes given every hour, or every two hours ; and two pounds of decoction of bark, with an ounce of powder, was given in the day. The ointment, and calomel pills were gradually diminished, to two drachms of the former, four times in the day ; and two grains of the latter, every two hours. His sickness and vomiting still recurred. The burning sensations of the abdomen continued. And he was sensible of a feverish exacerbation every third day. Nov. the 17th, the pills were omitted, and the other medicines continued.—18th, he had not taken any of his medicines the day before. Complained of the offensive smell of his breath. This was evidently occasioned by leaving off the medi-

cines. Being tired of all those to which he had been accustomed, I thought it might be of use to try the effects of *hepar sulphuris*, to remove the offensive smell of his breath, and prescribed one drachm three times a day. The other medicines (*viz.* decoction of bark, glysters, and draughts) were, at the same time, desired to be continued.—20th, he had frequent sickness, and vomiting; much purging, and great thirst. No appetite; and a sense of burning heat in his stomach and intestines. Common flowers of sulphur had been given, instead of the *hepar sulphuris*. They were desired to be omitted. Two pounds of decoction of bark, with half an ounce of æther, was given, in the course of the day; and the draughts were repeated.—22d, his symptoms continued as before. There was an evident enlargement of the right lobe of the liver; but no perceptible undulation. From that period, he had two pounds of decoction of bark, with two hundred drops of tincture of opium, in the day; the draughts occasionally at night; calomel, castor oil, and other medicines were also given, and alternated, so as to prevent, as much as possible, his being disgusted with a sameness of treatment. But the symptoms were rather increasing in violence. The purging became more severe, with blood in his stools; sickness and vomiting more frequent; he complained much of heart-burn; and had sometimes feverish paroxysms, which seemed to be of a quartan type.



There was, from the beginning, a flush in both cheeks, like those of a consumptive person. He complained of insensibility of the back, and weakness of the extremities. From all these circumstances, and from no increased flow of saliva having been produced by the mercury, I concluded that there was such a degree of local disease, as to render the case incurable, by any treatment that was possible, in such a situation, to be pursued. It was, however, persisted in, with as much regularity as was practicable. He continued gradually sinking, until the 2d of December, when he died.

Upon dissection, the left lung was found adhering strongly to all the neighbouring parts. Its substance was unusually dry, hard, and yellow; and appeared as if it had not, for some time, transmitted blood, or performed its proper functions. The liver weighed about five pounds<sup>4</sup>, was considerably indurated, but had undergone no suppuration. The other abdominal viscera were adhering, in such a manner as to form but one mass; with the exception of the spleen, which had a sound appearance. The cœcum, colon, and rectum, were ulcerated throughout their whole extent. The ulcers were, in many places, an inch in diameter;

<sup>4</sup> The average weight of a sound liver, I believe, may be about three pounds and an half, or perhaps somewhat more.

and had penetrated the two inner coats. It is somewhat remarkable that, in between thirty and forty cases of dysentery which I have seen opened, there was not, in a single instance, any of the scybala mentioned by authors, as a symptom of that disease.

The uncommon quantity of mercury that was here used, without being followed by any affection of the mouth, was a sufficient proof that there existed a lesion of organs, which, if curable, required the application of still higher powers than those that were employed. Even in external local affections, it is now well known, that a cure depends more upon the support of the general excitement, than upon local applications. The cure then, of internal local disease, were it even possible to apply local remedies, must still be performed by the application of powers, calculated to support the general excitement.

We have yet, perhaps, no adequate idea of the degree of power, that may sometimes be required, to produce this effect. But it is very certain that, while in some cases by far too little, in others by far too much of stimulant power is applied. Mercury, for instance, in cases of dysentery, is generally used in too small proportions, while in venereal cases, it is by much too freely given. Half a grain of calomel, or less, given every two or three

hours, will, in a short time, effect a cure in ordinary cases of chancre, gonorrhœa, or even a certain degree of syphilis. In these cases, there is seldom any great degree of organic lesion, at least of those organs which are most essential to life. It is only when some of the primary organs are in a state of local disease, that a great and long continued application, of high stimulant powers, becomes necessary, in order to reproduce health. Of this, dysentery is one of the most familiar and fatal examples.

The diminution of the medicines that was made, at one period, upon the prospect of the patient being better, was injudicious. Although, in such a case, no plan would probably have succeeded, a perseverance in the regular application of high exciting powers, would have given him one chance of recovery.

The offensive state of his breath, of which he complained on the 18th of November, was evidently occasioned by the subduction of the medicines. This is a symptom of indirect debility, as well as salivation, purging, sweat, or any other effect of an irregular application, or sudden subduction, of mercury. That these effects are so frequently produced, by the ordinary mode of exhibiting that medicine, ought not to surprise us. It is also obvious that, if, when given at random,



this and other medicines of high stimulant power so frequently produce good effects, their salutary effects, when applied according to just principles, may be expected to surpass any thing, of which we can yet form an idea.

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### CASE XVIII.

*Dysentery cured by Mercury and Opium, in Bengal, in 1796.*

JOHN CLUFF, aged 30, was admitted into the General Hospital, at Calcutta, on the 18th of November, 1796, with a dysentery of some days standing. He had incessant calls to stool, passed blood, with severe griping, tenesmus, and pro-lapsus ani. His thirst was intense; and he seemed in dreadful agony, from lancinating pains. Six grains of opium, and eight grains of calomel, were ordered to be given every hour; a glyster, with three ounces of castor oil, and three ounces of warm water every hour; and half an ounce of mercurial ointment to be rubbed in, four times in the day. A bottle of Madeira, in two quarts of barley water, was prescribed for drink. At twelve o'clock A.M. he had taken two of the pills, and seemed easier. In consequence of a consultation,

the pills were ordered to be omitted, and two ounces of the following mixture to be given, every half hour; viz. Sal Cathart. Amar. ten drachms, Crem. Tart. two drachms, Tart. Emetic two grains, water one pint. A draught, with one hundred drops of tincture of opium, was ordered at eight o'clock, and another at twelve. November the 19th, after having taken the mixture, he was both vomited and purged. These operations continued occasionally during the night, and were not entirely stopped by the draughts. His pulse was 92, tongue foul, and thirst intense; he complained of great pain across the umbilical region; and passed blood in his stools. The mixture was ordered to be repeated; the ointment and glysters to be continued; warm fomentations to be used; and three draughts, with one hundred and fifty drops of tincture of opium in each, were ordered to be given at night, at intervals of three hours. November the 20th, he was much better. His tongue, however, was foul. The glysters did not seem to produce much effect. The mixture, ointment, and draughts were ordered to be repeated; and the glysters to be discontinued.—21st, having, on the evening of the 19th, taken his three draughts at once, in the course of yesterday, he became rather confused; and was dissuaded, by one of his comrades, from taking the draughts the night before as prescribed. He appeared much confused; but the purging was less severe.

The mixture, ointment, and draughts, with one hundred drops in each, were desired to be repeated.—22d, he was again dissuaded, with the best intentions however, from taking his draughts; in consequence of which his confusion increased, and he ran about the ward, in a state of considerable derangement, all night. I represented to his friend, who had withheld the medicines through kindness, the danger of persevering in such conduct; and entreating that he would exhibit the doses exactly as they were prescribed, which he afterwards punctually did. But in order to insure a compliance, I thought it best occasionally to vary the remedies, and to use such as should fall in with the prejudices of the patient and his friend. Accordingly one drachm of jalap was immediately given. The warm bath was desired to be used three times a day; and after the bath, two drachms of mercurial ointment to be rubbed in, each time. When the operation of purging should commence, after the exhibition of the jalap, a pill, consisting of four grains of opium, and six of calomel, was directed to be given every hour; and to be continued through the night, in lieu of the draughts.—23d, in the course of the preceding day and night, he had taken nine pills, consisting of four grains of opium and six of calomel each. He slept well; had little purging; and was free from pain. He only complained of weakness and thirst. The pills were reduced to two grains of opium,



and four grains of calomel, every two hours. The ointment was continued; and the bath and glysters omitted.—24th, he was better. He still passed some blood by stool, and had a difficulty in making water. He complained that his mouth was sore. These symptoms I judged to have arisen, either from the subduction of stimulus the day before having been too great, or the patient having neglected to take the quantity that was prescribed. The medicines were desired to be continued; and the patient was particularly enjoined to take them regularly.—25th, his mouth was less sore, he had fewer stools, and no blood in them; his skin was moist, and his pulse 80.—26th, pulse 88, and smaller. Purging and griping continued. By mistake, he had no pills during the night. This fully accounted for the alteration since the day before. He was ordered to have a quart of decoction of bark, with two hundred drops of tincture of opium, to be taken in divided doses through the day. Two drachms of mercurial ointment, and one drachm of calomel, were rubbed in four times in the day<sup>1</sup>. On the 27th, he was rather better; the medicines were continued; on the 28th he was much the same; the decoction, with two hundred drops of tincture of opium, was continued.—He did not always

<sup>1</sup> On the 26th and 27th there was an omission, in not prescribing draughts or pills, sufficient to support the excitement in the night.

take the whole of the decoction ; but generally more than two thirds of it. The ointment was diminished to one drachm four times in the day ; and two draughts, with eighty drops of tincture of opium in each, were ordered to be given in the night.—29th, he had taken the draughts and slept well ; had only one stool ; pulse 84 ;—tongue clean ; he felt some degree of oppression about the pit of the stomach ; a blister was applied ; the ointment was omitted ; the decoction of bark, with tincture of opium, was ordered to be continued ; and the draughts to be reduced to sixty drops. From that period, he continued to get better. The stimuli were increased, or diminished, according to circumstances ; and on the 12th of December, he was discharged without any complaint, excepting a little griping at times. At his own request, he had a small phial of tincture of opium, and some pills, with directions how to take them, if required, before he could join his ship at Diamond Harbour.

When, in consequence of consultations, as happened in this case, cathartics were exhibited, I endeavoured so to manage them, as regularly to support the excitement ; and to prevent, as far as possible, the state of indirect debility, which constitutes vomiting and purging, by exhibiting other stimuli, on the commencement of these operations. But this is generally very difficult

to accomplish, principally from the ideas which patients traditionally imbibe, of the utility of these operations.

According to the hitherto uncertain state of the art, it is not surprising that consultations, in which, to use the words of an elegant writer, “learned physicians neutralize their plans<sup>7</sup>,” should seldom be productive of benefit to patients. They are too often scenes of mutual complaisance, in which he, who has most to gain, sacrifices most of his opinion. This has been a subject of much regret to sensible men of the profession; and such scenes have consequently been avoided by many of them. It is no mean proof of the truth of the medical principles, asserted in these pages, that two persons, who thoroughly understand them, will differ, but in a very small degree, in their application to practice. In this respect, I have known a coincidence so perfect, that it could, in no other manner, be accounted for. Their general adoption, then, would banish that vulgar adage, which, at present, not undeservedly attaches ridicule to the cultivators of the healing art—“doctors differ!”

In the report of the 24th of November, it is observed, that the patient had a difficulty in

<sup>7</sup> Aikin's Letters to his Son.



making water, and a soreness of the mouth, which were judged to have arisen, either from the subduction of stimulus, on the 23d, having been too great, or his having neglected to use the quantity prescribed. This is not hypothesis, but a clear induction of facts. It is certain, that a difficulty of making water, is a symptom that arises from a state of indirect debility, whether that succeeds the exhibition of cantharides, opium, or any other stimulant power. It is also true, that it may be cured by opium, the warm bath, or cantharides. The general mode of applying blisters is such, as often to induce that state; and is therefore improper. Blisters of a small size, frequently repeated, will produce a regular excitement, like successive frictions of mercurial ointment. But they ought not to lay on the skin ten or twelve hours; nor so long as to be succeeded by vesication, which is a state of indirect debility. Neither is it necessary that they should be applied, in preference, to any particular spot. For, although they make the first, and a somewhat greater impression, upon the part with which they come immediately in contact, yet, to whatever part of the body they are applied, their action will extend to every other. The action of stimuli upon the excitability, may be compared to an electric shock, which, seemingly at the same instant of time, affects every person in company; the nearest and the most distant from the phial.

When the *modus operandi* of the one is ascertained, we may expect to ascertain the *modus operandi* of the other.

In the preceding, as well as in many other cases, medicines were often exhibited improperly ; sometimes from omissions in prescribing, sometimes from negligence or mistakes of attendants, and sometimes from the prejudices of the patient.

With any number of patients, there cannot be much difficulty in prescribing, according to the old plan of practice, which consists in giving certain fixed doses of medicines, in every disease, whatever be its degree. But justly to proportion the application of stimulant powers, to the exhaustion of the excitability of each patient, requires more exertion of judgment and consideration, on the part of the practitioner, and a stricter conformity with directions, on the part of the patient, and of the attendants. It is evident, then, that, in an hospital, it requires an unusual degree of exertion to apply these principles to practice, in from thirty to forty bad cases of disease, daily. But it is their introduction only that is difficult. Once generally admitted, their application would be attended with as much facility, and certainly with more pleasure, because with more success, than any routine of empiricism.

## CASE XIX.

*Complication of Remittent, with alternate Diarrhœa, and Constipation, &c. cured by Mercury, Opium, Blisters, and the warm Bath, &c. in Bengal, in 1796.*

ISAAC HUDSON, aged 30, was admitted into the General Hospital at Calcutta, on the 31st of October, 1796, with the following symptoms: Pulse 132, and small. He had for some time feverish paroxysms, at 11 o'clock A. M. and 11 P. M. which continued between two and three hours. Tongue foul; skin hot; his bowels were quite irregular, sometimes extremely loose, at other times excessively costive. He had a cough, with hoarseness; and pains of the bones and joints. Together with these complaints, he had chancres of a fortnight's standing.—One grain of opium and one grain of calomel were prescribed every hour; and two drachms of mercurial ointment were ordered to be rubbed in, three times in the day. November the 1st, pulse 96. The fever and purging continued. His pains were rather less severe. His tongue was very white. Ten grains of calomel were given every three hours. On the 2d, his pulse was 92. He had



taken four doses of the calomel. His tongue was less foul. Eight grains of calomel were ordered every three hours, day and night.—3d, pulse 88 ; he had taken eight doses of the calomel. He had a sore throat and hoarseness, with an incipient spitting. The calomel was omitted, because it was deemed highly probable that he would not have taken it, if prescribed. Three grains of opium were given every hour. And three drachms of ointment were ordered to be rubbed in, three or four times in the day.—4th, his mouth and throat were very sore, and he spit some blood ; from whence it was concluded, that he had omitted to take his medicines, or that he had used them in an irregular manner. A blister was applied to one of his cheeks ; two grains of opium were given every two hours ; and a glyster, with one ounce of castor oil, was ordered every two hours. He was allowed four glasses of wine in the day. On the 5th, his mouth became very sore, and there was some increased flow of saliva. A blister was applied to the other cheek ; the pills and glysters were continued ; and he was allowed six glasses of wine.—6th, his mouth became exceedingly sore, and his face more swelled. He had no stool ; a blister<sup>1</sup> was applied to his

<sup>1</sup> Among patients, upon whose veracity there is not much dependence, I prefer, in these cases, the use of blisters, upon this principle, that they cannot deceive.

breast. The pills were ordered to be continued, and a glyster, with two ounces of castor oil, to be given every second hour.—7th, he was much in the same state; the medicines were ordered to be continued. On the 8th, he had some difficulty of breathing, his pulse was exceedingly small, and he had fainting fits. Upon enquiry, it was found that he had lately neglected to take the medicines, which he himself confessed. In order to ensure compliance in this respect, a change was made in the medicines. He was put into the warm bath, three times in the day. The glysters were continued. And he had three draughts, with one hundred drops of tincture of opium in each, at regular intervals in the night. 9th, he was better: his pulse was 108 and stronger. Cough less severe, and swelling of the face abated. The bath, and glysters were ordered to be repeated; and a draught, with forty drops of tincture of opium, to be given every hour.—10th, he was much in the same state; the medicines were continued.—11th, his breath was very foetid, and tongue much swelled; which evinced that he had been irregular in taking his medicines. A blister was applied to his neck, and the other medicines were continued.—12th, he was rather better; the medicines were continued, and two drachms of ointment were ordered to be rubbed in,

twice a day <sup>2</sup>.—14th, his mouth continued very sore, and he complained of weakness ; one drachm of ointment was rubbed in three times in the day, and the other medicines continued—15th, he seemed better, but complained of weakness ; some blood was discharged from his mouth and fauces ; he did not permit the ointment to be rubbed in the day before. The ointment and glysters were continued ; and he was enjoined to use his medicines regularly. The following mixture was given,—decoction of bark two pounds, powder of bark one ounce, tincture of opium one hundred and fifty drops ; the whole of it was ordered to be taken, in divided portions, in the day. The draughts were continued as before. From that period he got gradually better. His mouth became more or less sore, in the exact proportion of the regularity, with which he took his medicines. By that symptom, I could detect his irregularities. He continued, for some time, subject to purging, and slight paroxysms of fever occasionally. But, by a perseverance in the same plan of treatment, and a gradual diminution of the medicines, he remained, on the 13th of December, free from complaint, excepting a slight sore-

<sup>2</sup> This was too seldom. Wherever mercurial frictions are necessary, they ought to be used at least four times in the day ; and it would also be attended with advantage to repeat them at night.



ness of the mouth. And on the 14th, when I discontinued attending him, he was in an advanced stage of convalescence.

This is one of those cases, which shew that soreness of the mouth, and salivation, do not arise from the action of mercury, when regularly applied, and gradually decreased ; but that these, and other symptoms of indirect debility, arise in consequence of its irregular application, or sudden subduction. This patient, like many others, was so sensible of the truth of the above observation, that, after there was a necessity for using the warm bath, he took his medicines with much regularity, until he became convalescent. He was, from repeated experience, convinced that the soreness of his mouth increased, upon the subduction of the mercury, opium, or warm bath.

From the beginning, I was doubtful of a recovery. For, a small and quick pulse, hoarseness and difficulty of breathing, and the very irregular state of his bowels, indicated that some degree of local affection, both of the thoracic and abdominal viscera, had taken place. From the issue, however, it appeared, that they were of such a degree, as to admit of a regeneration of organs.

## CASE XX.

*Dysentery, cured by Mercury and Opium, in Bengal, in 1796.*

ABRAHAM JACKSON, aged 23, was admitted into the General Hospital, at Calcutta, on the 15th of November, 1796, with dysentery of a few days standing.—16th, he had four doses, consisting of ten grains of calomel each, through the night. Pulse 100; tongue white; skin hot. There was a considerable quantity of blood in his stools. Ten grains of calomel and four grains of opium, were ordered to be given every three hours; and a glyster, with two ounces of castor oil, every two hours. On the 17th, he was rather easier; but had been much griped through the night<sup>1</sup>. The glysters gave him ease. The pills were intended to have been continued through the night; but as it was not particularly expressed in the report, they were not given. The pills were omitted; a glyster was given every hour; and common infusion of senna, with two grains of tartar emetic, in small doses, frequently repeated through the day. Draughts, with eighty drops of tincture of

<sup>1</sup> Griping, purging, and restlessness, are frequently produced under a course of opium, or mercury, in consequence of the doses not being properly repeated through the night.

opium, were desired to be given at bed-time; and to be repeated, according to circumstances, through the night.—18th, he was rather better. One grain of opium, and four grains of calomel, were given every second hour. Two drachms of mercurial ointment were ordered to be rubbed in, four times in the day. The glysters and draughts were continued.—19th, he had taken only one draught; and his head became confused towards morning<sup>2</sup>. He was much griped. Pulse 80. The draughts were omitted, from a conviction that he would not take them. The other medicines were continued; and warm fomentations applied to the abdomen.—20th, he had not slept well, and was much purged and griped. The pills were omitted; and a solution with ten drachms of sal catharticus amarus, and two grains of tartar emetic, was given, in small doses, through the day.—21st, from this period, he had a quart of decoction of bark, with one hundred drops of tincture of opium, daily; one drachm of mercurial ointment was rubbed in, four times in the day; and three draughts, with sixty drops of tincture of opium in each, were given at intervals during the night. He continued to get better. On the

<sup>2</sup> It cannot be too often insisted on, that this symptom arises from medicines not being properly repeated. It is what frequently happens, in the ordinary way of exhibiting opium; and for which the medicine itself is by no means to blame.



28th, he was so well, as to ask leave to go to town.—29th, having committed excesses the day before, he had pains and other feverish symptoms. His pulse was above 100. He was ordered to have a mixture of *sal catharticus amarus* ; and the draughts were repeated. 30th, he had a severe paroxysm of fever in the night, and perspired profusely. Pulse 100. Two grains of opium and six grains of calomel, were given every second hour. Two drachms of mercurial ointment were directed to be rubbed in every three hours<sup>3</sup>. December the 1st, he perspired profusely, and had a paroxysm of fever in the night. Pulse 100. Three drachms of ointment, with one drachm of calomel, were ordered to be rubbed in, four times in the day. The pills were continued. And three draughts, with sixty drops of tincture of opium in each, were ordered to be given, in the course of the night.—2d, he was worse. His pulse was 112 ; he had a paroxysm of fever, and some purging in the night. The ointment was continued. A pill, with four grains of opium and eight grains of calomel, was given every second hour in the day ; and three draughts, with eighty drops of tincture of opium in each, in the night. On the 3d, he was better. Pulse only 100. On the 4th, his pulse was 96, and his mouth a little

<sup>3</sup> It was a great omission, at this time, not to have given draughts, or pills, through the night.

sore.—4th, 5th, and 6th, his medicines were continued ; he was better, and had no fever. On the 7th, having discontinued his medicines the day before, his mouth became very sore, and an increased flow of saliva commenced. The pills were ordered to be reduced to six grains of calomel and three grains of opium ; the draughts to be repeated, and the ointment to be omitted. But as I had no reliance on his taking the pills regularly, a quart of decoction of bark, with a hundred drops of tincture of opium, was ordered to be taken in the day, to prevent his mouth from becoming excessively sore.—8th, did not take the pills on account, as he said, of his having some difficulty in swallowing them ; but took the decoction and draughts ; pulse 100 ; his mouth continued sore, and the flow of saliva increased. Three drachms of mercurial ointment were ordered to be rubbed in, four times in the day ; and he was informed that, if he did not allow it to be regularly applied, his mouth would become much sorer. The decoction and draughts were continued ; and the pills omitted.—9th, he spit freely ; and seemed much better. The decoction and draughts were continued ; and the ointment omitted. From that period, he was convalescent. And on the 14th of December, when I discontinued attending him, he had no complaint, excepting the soreness of his mouth ; which, however, was rapidly decreasing.

When the medicines were increased to a due degree, as on the 3d of December, the patient speedily got better; and had he continued to take them with regularity throughout, he would have got well much sooner. He had however taken a sufficient quantity, to be succeeded by an increased flow of saliva. And after that symptom occurred, he was considered as out of danger.

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*The two following Cases were treated by Dr. William Yates of the Madras Establishment, in 1796, at the Calcutta General Hospital.*

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## CASE XXI.

*Dysentery, with general Emaciation, cured by Opium, by Dr. Yates, in Bengal, in 1796.*

FRANCIS LOTE, aged 35, was admitted into the General Hospital, at Calcutta, on the 1st of May, 1796. At that time, he complained of general pains over his body, with all those symptoms which indicate an exhausted constitution. On



the 15th of May, he came under my care. At that time I found his mouth sore, from the use of mercury; and he was much purged and griped. On the 3d of June, when I discontinued attending him, his complaints were considerably relieved by the use of opium. On the 21st of August, he again came under my care, in a state of extreme debility, with excessive purging and bloody stools. During the whole of this time he had remained in the Hospital; but, from necessary arrangements, had fallen, during intervals, under the care of other gentlemen. During the last of these intervals, he was so extremely weak, that, in the act of vomiting, the right clavicle was fractured, which occasioned much pain. On that, and the two successive days, I gave him eighty drops of tincture of opium, morning and evening. On the 24th, in the morning, as no effect seemed to be produced by the medicine, it was ordered to be given three times a day. At one o'clock, P. M. the same day, I was called to him; and found him complaining of violent pain in the bowels, with incessant purging. He had taken the second draught about an hour before. The draught was ordered to be immediately repeated. At nine, P. M. he was not relieved; upon which one hundred and fifty drops of tincture of opium was prescribed immediately, and ordered to be repeated at twelve o'clock. A glyster, with two hundred drops of tincture of opium, was also given. On the

25th, he was easier. The glysters, with two hundred drops of tincture of opium, were continued every three hours, and the draught, with one hundred and fifty drops, was repeated in the evening. On the 26th, in the morning, he was nearly in the same state; the glysters were continued, and the draughts ordered three times in the day. At nine, P. M. I found that the relief from the glysters was merely temporary, that he had stools every hour, and no inclination to sleep. Four hundred drops of tincture of opium were ordered in glyster, every two hours, and a fourth draught of two hundred drops to be taken at twelve o'clock. On the 26th he was easier; he had six or seven stools in the night, with less griping. Slept better than he had done, since he came to the Hospital. His pulse beat about ninety strokes in the minute; previous to this, his pulse had been very quick and small, but the state of it was not particularly noted; he had one hundred and fifty drops of tincture of opium in the morning, and two hundred at twelve o'clock. Four hundred drops were ordered in glyster every three hours. One, P. M. he had five stools since morning; the glysters were continued; and a draught of two hundred drops ordered to be taken at four o'clock. At eight, P. M. he had thirteen stools since the last visit, with a good deal of pain in his bowels. He had not slept; was ordered a draught of four hundred drops of tincture of opium at ten o'clock.

August the 28th, he had slept a little the preceding night ; bowels were easier ; pulse 80 ; had draughts of two hundred drops every two hours, with the glysters occasionally. At two, P. M. his pulse was 90 ; he was in other respects as before ; had taken three draughts. The draughts of two hundred drops were repeated every hour. At nine, P. M. his pulse was still 90 ; he had dosed much, but had no sound sleep ; he had taken four draughts. A draught of four hundred drops was ordered to be given at twelve o'clock. On the 29th, his pulse was 80, and strong ; he had three stools, with less pain ; but slept little ; the draughts of two hundred drops were continued every hour.—Two, P. M. had incessant stools since morning, with violent pain of the bowels ; glysters of four hundred drops were ordered every hour. Eight, P. M. had four stools since two o'clock ; had taken only one draught ; his bowels were easy after the glysters ; pulse 112. Eight draughts, with two hundred drops each, were ordered to be placed at his bed-side, of which he was directed to take one every hour during the night, with glysters of five hundred drops every hour, in the intervals between the draughts.—30th, had six stools during the night. He was free from pain, and his pulse 80 and full ; the draughts were continued every two hours, and the glysters occasionally. Nine o'clock, P. M. he had eight or ten stools since morning, with



some griping ; pulse 90. The draughts were increased to three hundred drops every two hours ; and the glysters continued.—31st, had passed a good night ; his pulse was 90 ; he had five stools ; his medicines were continued as the day before. In the evening he was nearly the same ; no alteration was made in his medicines. September the 1st, he had six stools during the night, with griping ; did not sleep ; had no blood in his stools for two days ; the draughts of three hundred drops were given every hour, and the glysters of five hundred drops were continued as before, and repeated according to his own discretion, as the tenesmus and griping might indicate.—Eight, P. M. he was much worse ; had eight stools during the day, and no sleep ; his pulse was 120, and he was so extremely weak, that I considered him as approaching to dissolution. Draughts of five hundred drops each, were ordered to be given every hour, and the glysters of five hundred drops, to be continued as before.—2d, he had not slept, but felt himself better ; pulse 104 ; his medicines were continued in the same manner during the whole of that day. On the 3d, his pulse was 100 ; he had slept well the preceding night ; his medicines were continued. On the 4th, he was much better, had dosed much, and had only two stools ; the draughts were directed to be taken occasionally, as circumstances might indicate. This plan was continued

until the 14th, at which time his mouth became sore, and the flow of saliva was increased, as if he had been using mercury. The draughts and glysters were, from that period, ordered to be repeated occasionally, according to his own discretion. On the 22d, the discharge of saliva continued in the same state. On the 26th, he was better; and his bowels easy.—29th, he continued without pain, with two or three stools in the day, and his strength increasing. On the 30th, when I discontinued attending him, he had only two stools in the day, without pain; and felt a returning appetite. Being a sensible and steady man, he was, at that time, allowed to proportion the strength and frequency of the draughts and glysters, according to his own judgment. During the whole of the time that he was under my care, he had an allowance of wine, from one to two or three bottles in the 24 hours, according to exigency. From his good sense and punctuality, I had a perfect reliance upon his having conformed to my orders, in every particular, as far as it is possible for patients, in an hospital, to do.

The treatment of this case may give some idea of the manner in which stimuli should be increased, in diseases of great exhaustion, until the quantity is ascertained, which is capable of producing the highest degree of excitement. It will shew the very great quantity of the most powerful stimuli

that may be necessary, in some diseases of that state, in order to effect a cure ; and is also an example of the mode in which the doses ought to be repeated. The soreness of the mouth, and the increased flow of saliva, evince that there is a greater similitude between the action of opium and mercury, than has yet been acknowledged. The soreness of mouth and spitting commenced, after the quantity of opium was diminished. Upon resuming the draughts, the mouth became less sore, and the flow of saliva decreased ; and upon leaving them off, the soreness and spitting increased. This was repeatedly remarked by the patient himself. It should be observed, in order to prevent a rash imitation, where the circumstances are not alike, that the tincture of opium employed, upon this occasion, was much weaker than what is usually made in Europe ; that a very great degree of exhaustion had taken place ; and that the doses were gradually increased, from eighty drops to five hundred.



## CASE XXII.

*Dysentery cured by Mercury and Opium, by Dr.  
W. Yates, in Bengal, in 1796.*

— DE HAES, aged 40, was admitted into the General Hospital, at Calcutta, on the evening of the 26th of August, 1796, with dysentery of eight days standing. He had about thirty stools in the day, containing slime, mixed with blood; and complained of much pain in his bowels. His pulse was 90 in the minute. At 9 o'clock P. M. he was ordered to rub in, half an ounce of mercurial ointment, with half a drachm of calomel, and to take a hundred drops of tincture of opium, to be repeated at twelve o'clock.—27th, the ointment was omitted by neglect. He continued in the same state. Half an ounce of mercurial ointment, with a drachm of calomel, was ordered to be rubbed in immediately, and repeated at twelve o'clock. A hundred drops of tincture of opium was desired to be given every two hours. One o'clock P. M. he had ten stools since morning with blood and slime. Had taken only two draughts. The ointment was ordered to be repeated at four o'clock, a glyster with two hundred drops of tincture of opium to be given every two hours, and one bottle of wine to be taken in the course of the

evening. Eight P. M. pulse 100. He had six stools with less pain. The ointment was rubbed in, and glysters were regularly administered. The ointment was ordered to be again repeated at nine o'clock, the glysters to be continued, a draught of a hundred and fifty drops of tincture of opium to be given immediately, and to be repeated at twelve o'clock; and a bottle of Madeira to be given during the night.—28th, he had vomited several times during the night, but had only one stool; pulse 75. The ointment was ordered to be repeated, the glysters to be omitted, a draught with one hundred drops of tincture of opium to be given, and the wine to be continued. Two P. M. pulse 72; vomited twice since morning; he had only two stools, and the pain was less; he slept a little. The ointment, draught, and wine were repeated. Nine P. M. pulse 84, had vomited twice, and had six stools. He complained of vertigo; the ointment was repeated, a draught of two hundred drops of tincture of opium was ordered to be given at twelve o'clock, and the wine to be continued.—29th, his pulse was 80 and full. He had ten stools, consisting of slime and blood. The ointment and wine were continued, and a draught, with one hundred drops of tincture of opium, ordered every two hours.—Nine P. M. his pulse was 80, he had six stools, and frequent vomiting, particularly after taking the Madeira wine. The ointment was repeated, two hundred drops of tincture of opium ordered

every two hours, and port wine to be given in lieu of the Madeira.—30th, pulse 74. He had two stools, vomited only once, and slept a little. The ointment and wine were repeated, and the draughts with two hundred drops, continued every third hour. Nine P. M. he had several stools in the course of the day, with much pain. No return of vomiting; pulse 100. The ointment was repeated with two drachms of calomel. Draughts of two hundred drops each, were ordered to be continued every two hours. The port wine became disagreeable to him, and Madeira was again given.—31st, pulse 84; had only two stools, and slept well. His mouth was a little sore. The ointment was repeated with one drachm of calomel, and the draughts were continued every third hour. Nine P. M. pulse 80, he had eight stools. His skin and tongue were moist, and he began to spit a little. He had slept some during the day. The ointment, draughts, and wine were continued. September the 1st, pulse 76, he had only one stool, slept well, and was better in every respect. The ointment was repeated, with half a drachm of calomel; and the draughts and wine were continued. Eight P. M. continued better. He had no pains excepting in going to stool. The discharge of saliva was considerable. He had slept during the day. The ointment was omitted. A draught of two hundred drops of tincture of opium was ordered at twelve o'clock; and the wine



was continued.—2d, he had only one stool during the night; pulse 68; the ointment was repeated without the calomel; and the wine continued. Eight P. M. he had slept during the day, and spit considerably; the draught of two hundred drops was repeated at twelve o'clock, and the wine continued. 3d, he had slept well, and had no stool; the ointment was entirely omitted; and the evening draught and wine were continued. From that period the wine, and draughts occasionally, were continued until the 30th of September, at which time I left him in an advanced state of convalescence.

The great quantity of mercury that was used, in this case, in conjunction with opium and wine, shew what a high degree of stimulant power may sometimes be required to effect a cure, in the state of exhaustion, which constitutes dysentery.

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In the foregoing cases, in general, the state of the pulse has been noted, with some care. The pulse, in all its degrees of quickness, slowness, weakness, irregularity, and intermission, may be considered as a kind of thermometer, by which, together with the state of other functions, some judgment may be formed, of the state of the excitement. A deviation from health in the

state of the pulse, is one of the most constant symptoms of indirect debility. But the surest criterion yet known, by which to estimate the degree of exhaustion, is the effect produced, by the stimulant powers, applied for the cure.

When the effects of the mercurial ointment were not deemed sufficiently powerful, calomel was added. The ointment used was the strongest; but the quick-silver was not always sufficiently triturated. It is almost necessary to observe, that in dangerous Cases, mercury may at the same time be used, both internally and externally, with advantage.

The explanations annexed to the Cases will, perhaps, appear unnecessarily copious; and, in some parts mere repetitions. But that was deemed the most familiar, and therefore, in some respects, the best mode of illustrating the subject. Examples will often place inferences in a clear point of view, when they might not be obvious from general reasoning.

## CASE XXIII.

*Fever cured with Calomel only, without producing Salivation, or other disagreeable Symptoms. Communicated in a Letter from Mr. Syme, Surgeon of the Dublin, East Indiaman, dated Calcutta, 10th January, 1797.*

“ Dear Sir,

“ I embrace with pleasure the opportunity your advertisement<sup>1</sup> affords me of giving my testimony in favour of your new mode of practice, and of expressing my assent to your

<sup>1</sup> This was an advertisement, in the following words, prefixed to “ *A View of the Science of Life,*” published in Bengal in 1796: “ He who abandons principles in deference to popular clamour, and he who perseveres in error in spite of conviction, may indeed obtain a momentary celebrity; but they are equally unqualified for the promotion of science.

“ As truth, not an indiscriminate assertion of any doctrine, is the object of this publication, members of the profession, and others, who may be so inclined, are invited to communicate facts and observations, whether they may tend to confirm, or to refute the principles, which it avows.

“ The communications thus received, will be published, with comments, with or without the name of the author, as may be most agreeable to himself.”



doctrine that calomel and the other preparations of mercury, act upon the living body as stimulant powers merely, and may therefore be used generally for the cure of acute diseases.

“ I feel it the more incumbent on me to make the present communication, because I can, in this instance, speak with certainty, the experiment having been made upon myself; and because the novelty of the fact, that calomel, if given in repeated doses, at certain intervals, is not succeeded by purging, struck me with particular surprise. In common with medical men in general, I had hitherto believed that the purgative effects of calomel depended on the dose of it at once exhibited, without reference to any other circumstance; and that its curative effects depended on its purgative, and other evacuant operations.

“ I was, as you know, lately attacked with intense head-ache; vertigo, accompanied with an inflamed appearance of the eyes; urgent thirst; white, furred, and dry tongue; hot and dry skin; frequent nausea, and sometimes vomiting; quick and rather small pulse; costive and very tense belly; a sense of fulness in the chest; and some difficulty of respiration.

“ This concourse of symptoms, notwithstanding

the state of the pulse, would, I think, be considered in the ordinary language of medical systems, as an inflammatory fever, or perhaps, considering the affection of the breast, as partaking of the nature of peripneumony : and blood-letting, with other modes of debilitating, would, no doubt, have been advised.

“ These symptoms were soon followed by an alarming loss of strength, and general uneasiness.

“ Early on the morning of the second day, I took eight grains of calomel, simply with a view, according to my yet remaining scholastic notions, of procuring a free evacuation, by stool, *in order to discharge morbid matter*. In the course of the day, the medicine operated, and I thought myself somewhat relieved. But the symptoms still continuing very violent, I was urged, by my friend, Dr. James Robertson, to send for you.

“ At 5 o'clock, P. M. of the second day, when you first visited me, I took by your advice, four grains of calomel, and repeated the same quantity, every two hours, through the night, until I had taken six doses. In the morning, when I awoke, I was almost free from fever. When you again visited me (about 10 o'clock A. M. of the third day) you directed the quantity of calomel to be diminished to two grains every two hours ; and,

when symptoms should no longer require it, to be entirely withheld. This happened after taking the third dose, when no complaint, excepting a slight degree of general debility, remained.

“Thus, in less than thirty hours, did I take thirty eight grains of calomel, by which all the symptoms of fever, usually so alarming, were completely removed, without having produced, excepting the first dose, any perceptible evacuation.

I am, &c.

ROBERT SYME.”

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REMARKS BY C. M.

This is a Case, which, like Case 36, approaches, in the treatment, to scientific exactness. It was cured in about thirty hours from the time the calomel began to be regularly exhibited. The first dose, administered by the patient himself, in the ordinary manner, and with the ordinary intentions, was succeeded by purging. The subsequent doses were not, in any one instance, succeeded by this operation. Neither the fact, nor the explanation of it, were, to me, new. Purg-



ing, being nothing else than a symptom of diminished excitement of the intestines, necessarily occurred, upon the cessation of the action of the first dose of the remedy, from that action not being duly supported, by a repetition of doses, at the end of every two hours, that being the computed period of the duration of the action of each dose of calomel in a grown person. The reason why purging did not take place, after any of the succeeding doses, is, that they were repeated at such intervals, as regularly to support the excitement. These doctrines are also strikingly elucidated in 36, and other Cases of this collection. Their treatment, and its results, demonstratively shew, that instead of the operation of purging being at all essential, or even conducive to the cure of these diseases, they are more safely, more expeditiously, and more pleasantly removed without it. Nay, it being positively a symptom, denoting diminished excitement, or disease, it is obvious that purging should never be suffered on any occasion to take place ; excepting when it may be thought necessary to ascertain, by this sign, that the previous excitation of the power employed, has arisen to the required degree, and when there are no other means of ascertaining this circumstance."

## CASE XXIV.

*Communication from Dr. James Robertson, of the Bengal Establishment, dated General Hospital, Calcutta, 6th February, 1797.*

“From a great many Cases, which I have treated at the General Hospital, I send you a few, that tend, in my opinion, to confirm the efficacy of the mode of practice, resulting from the principles of the doctrine of excitation. They are not particularly selected, but taken indiscriminately from among a great number, wherein the practice proved alike successful. The remaining ones are so numerous, and so similar to those sent, that, even if the task were not too irksome, I should deem it unnecessary to copy them.”

“Nor have I any hesitation in declaring that, when, in consequence of my intercourse with you, I was first led to adopt this practice, I was in a great measure unacquainted with the principles, on which it is founded, and not a little sceptical in my opinions respecting the efficacy of medicine in general.

“Partiality, therefore, or a blind attachment to the doctrine, could, on my part, have had no

share in its adoption. In truth, my almost total want of confidence in medicine, as it is at present generally conducted, more especially in high degrees of disease, prompted me, independently of all other considerations, to the trial of a practice, that, to me, was new; and the success, which has attended this trial, confirms me in its continuance.

“ On the particular Cases herewith transmitted, I have made but few comments. Upon the whole, I can, with truth, affirm, that the results of this mode of practice, in my own hands, although I am sensible it has, for the most part, been conducted on a more limited scale, than an intimate and minute knowledge of the principles would have warranted, have, however, even according to this imperfect mode of applying them, been such as to convince me of its pre-eminence.

“ To the Case of Adam Roselle, I beg particularly to call your attention. On the 5th of October, you will observe, he came under my care, in a state of convalescence from Hæmoptoe. Soon thereafter the disease returned, and being a stout man, of what is called a plethoric habit, I adopted the usual mode of practice, which seemed to produce temporary benefit. But such a degree of debility, and obstinate confirmation



of the disease ensued, that I was induced to try the stimulating powers of calomel and opium, having by a reference to the books, found them useful in the first attack he had experienced, then under the care of Dr. Yates. That they proved powerfully efficacious the result evinces; and I am happy to acquaint you, that although discharged from the General Hospital only on the 5th of December last, he is now one of the healthiest men in the Battalion.

I am, &c. &c. &c.

JAMES ROBERTSON."

The eight following Cases were communicated by Doctor Robertson, with the preceding letter.

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## CASE XXV.

*Hæmoptoe cured by Calomel and Opium, by Dr. Robertson, at the General Hospital, Calcutta, 1796-7.*

ADAM ROSELLE, 2nd European Regiment, was admitted into the General Hospital at Calcutta, on the 17th of August, 1796. He was taken ill, while performing the manual exercise, that

morning. Had been discharged a month before, having been ill of the same disease. Has some cough. Pulse 64 and full. Bowels regular, was directed to take two ounces of common decoction of Peruvian bark, with vitriolic acid, every hour.

August 21st, 22d, 23d. He frequently discharged blood, particularly on coughing or moving; and complained of a violent pain of the breast. A blister was applied to his breast, and he was directed to take a drachm of nitre three times a day.—26th, Cough and hæmoptoe continue. A mixture, consisting of a hundred drops of tincture of opium, and eight ounces of peppermint water was prescribed; a table spoonful to be taken frequently.—28th, Complaints continue the same. The quantity of tincture of opium in the mixture, to be increased to 300 drops.—30th, Mixture eases his cough somewhat: To be continued.—31st, No alteration. Sixty drops of concentrated nitre acid to be mixed with two pounds of water, and half an ounce of common syrup. An ounce to be taken four times a day.

Sept. 8th, Has frequent stools, with blood, attended with griping and straining. Hæmoptoe continues. Half an ounce of mercurial ointment to be rubbed in, three times a day, and four grains of opium to be taken also, three times in the day.—11th. His mouth became sore, and fauces

swelled. Hæmoptoe ceased. The medicines were continued, and a gargle prescribed.—13th, Had six stools. The opium and gargle were continued, and the ointment omitted.—14th, Had eight stools, with blood. Four grains of calomel and two grains of opium were directed to be taken three times in the day.—15th, Discharged a little blood from the mouth this morning. The calomel and opium to be continued, and a gargle to be used.—16th, The blood discharged seems to come from the fauces. The medicines to be continued.—19th, Mouth still extremely sore. To have six glasses of Madeira wine daily<sup>1</sup>.—21st. Better.

From this date to the 5th of October, he continued convalescent. On that day, he came under my care, complaining only of slight pain of one of his arms till the 9th of October, when he vomited a quantity of apparently unmixed blood, and complained of violent pain of his breast. Pulse rather full, but otherwise regular. Twelve ounces of blood to be extracted from the arm, and

<sup>1</sup> About this period, there seems to have been an omission or inaccuracy in the reports. It is probable, that between the 16th, and 19th, the calomel was considerably diminished, or entirely withheld. But in the rapidity of writing hospital reports, such inaccuracies must frequently be expected to occur, under the most attentive practitioner.



draughts of thirty drops of elixir of vitriol in an ounce of water, to be taken every three hours<sup>2</sup>.

October 10th. Pain of breast seems relieved. But cough and spitting of blood continue; cosine; pulse regular. The draughts to be omitted, and a powder consisting of one scruple of jalap and two scruples of cream of tartar to be taken immediately<sup>2</sup>.—11th, Pain of breast more violent, and continues to discharge blood upon coughing. Had no stool after the physic. To have immediately four grains of calomel and one scruple of jalap.—12th, Pain rather less severe.—Still spits a small quantity of blood. Two ounces of decoction of Peruvian bark, with twenty drops of elixir of vitriol, to be taken every three hours<sup>2</sup>.

Oct. 13th—17th. The bark decoction and oleaginous mixture were persevered in; but his pains increasing, on the 14th a grain of opium was ordered to be taken every four hours.—17th, Complains of great pain below the cartilago ensiformis. The region of the liver feels tense, and the liver seemingly enlarged. Four grains of calomel and one grain of opium were directed to be taken every four hours.—18th, An addition was

<sup>2</sup> These evidently were not the uncontroled prescriptions of Dr. Robertson. C. M.

made of two drachms of mercurial ointment to be rubbed in, in the course of the day. This plan was continued to the 25th, the symptoms of disease gradually abating. A salivation now ensued; no other complaint. The mercury to be omitted; and an electuary of cream of tartar and sulphur, with a gargle, to be used.

Nov. 2d. A superficial tumour appeared on his right side, which suppurated, and was laid open. He continued, in other respects, free from complaint, and his mouth was gradually getting better. —11th, Pain of breast returned, and on the 12th hæmoptœ. A pill, consisting of three grains of calomel, and one grain of opium, was given three times a day. This mode of practice was continued, and the symptoms gradually abated till the 18th, when his mouth became affected. The pills were reduced to two grains of calomel and one grain of opium in each.—19th, Mouth continues slightly sore, with an inconsiderable spitting of saliva. The pills to be reduced to two grains of calomel and one grain of opium. All symptoms of disease excepting at times a trifling discharge of blood, seemingly from the fauces, have disappeared.—30th, This symptom also vanished.

Dec. 5th. Was discharged from the Hospital completely cured.

N. B. From the 20th of September, this patient was allowed six glasses of Madeira wine daily.

J. R.

#### REMARKS BY C. M.

This patient, as sometimes happens from the succession of practitioners in the General Hospitals of India, passed through a variety of hands, and a variety of modes of treatment. The bark, elixir of vitriol, nitre, oleaginous mixture, jalap, and blood-lettings, here prescribed, are so many parts of the common routine practice of this, and almost every other hospital, which do not seem to have produced any permanent advantage. But it will be observed, that the application of calomel and opium, by Dr. Yates, in the month of September, and afterwards by Dr. Robertson, in October and November, was succeeded by a marked and uniform progression towards health. I have so often, both before and since the communication of this case, treated bleeding discharges successfully with opium and mercury, that no doubt remains in my mind respecting the truth of the doctrine, as applied to these diseases<sup>1</sup>.

<sup>1</sup> See especially Case LXIV. of this Collection.



But it will also be observed that, although a cure was accomplished, the principles were not, in this case, by any means correctly followed. A correct application of them would infer, not only the cure of the existing disease, but the prevention of the diseases, which depend upon the diminution, suspension, or cessation, of the action of the remedy, or remedies employed. In justification of these inaccuracies, however, it ought to be stated, that during the treatment of this case, the doctrines in question were only in their dawn; and that, at this very time, a change of medical opinions was only taking place in Dr. Robertson's mind. It cannot, therefore, be surprising, that they were not followed with the accuracy and decision, which would have resulted from a more intimate knowledge of them. But, as Dr. Robertson very justly remarks in his letter, the results, even according to his yet imperfect notions of their application, were such as to convince him of their pre-eminence.

That the cure, in this instance, was likely to prove permanent, appears from the patient having, on the 6th of February, 1797, two months after he was discharged from the Hospital, been considered one of the healthiest men of his battalion.

## CASE XXVI.

*Affection of the Liver, with Intermittent Fever, cured by Mercury and Opium, by Dr. Robertson, at the General Hospital, Calcutta, in 1796-7.*

JOHN SKEARNS, a debilitated old man, was admitted into the Calcutta Hospital on the 11th of December, 1796, and on the 12th, put under the charge of Mr Brydie. The following are his reports.

12th. Has been, for several days, griped and purged ; stools mucous ; tongue foul ; skin cool. Has had no stool, however, since yesterday morning. Had medicines in the barracks. To have a cathartic mixture ; and afterwards an anoydne draught, with fifty drops of tincture of opium.—13th, Has been much griped and purged in the night. To take decoction of Peruvian bark, infusion of japonica, of each half an ounce, and ten drops of tincture of opium every two hours.—16th, The medicines have been continued since last report. Was much griped last night. No stool since yesterday morning. To have two ounces of ca-

thartic mixture<sup>1</sup>; and, after its operation, the mixture to be taken as before.—17th, Mr. Brydie discontinued attending him, and he came under my care. Had five stools in the night, with griping. To have a draught twice a day, composed of one ounce of tincture of rhubarb, and fifty drops of tincture of opium.—18th, Very much griped. The draughts to be omitted. To have four ounces of purging mixture, and afterwards an anodyne draught, with sixty drops of tincture of opium.—19th, Griping increased. Four stools; but no discharge of blood; much thirst. An ounce and an half of cathartic mixture, with twenty drops of tincture of opium, to be taken every two hours.—20th, Was again removed under the care of Mr. Brydie. Report: still much griped. The medicines to be continued, and the abdomen to be fomented three times a day.—21st, Four stools; griping easier. Had a paroxysm of fever last night from eight to nine o'clock; slept well. The decoction of bark to be taken as before.—25th, Has continued nearly in the same state since last report. Sometimes loose, sometimes constive, sometimes much and sometimes little griped. On the 22d had ℥ii of purging mixture. Has been occasionally feverish at nights. Had only

<sup>1</sup> Formula of the cathartic mixture of the Hospital.

℞ Sal. cathart. amar. ℥iss

Tart. emet. gr. ii

Aq. commun. ℥viii.

This is administered in divided portions.



one stool since yesterday ; but was much griped in the night. Pulse soft, and only 56. Tongue very foul. To have two scruples of compound powder of jalap, and six grains of calomel immediately ; and, after its operation, the decoction to be repeated as before. To have six glasses of wine daily.—26th, Hot and feverish in the night, with head-ach. Decoction to be continued.—27th, Had a paroxysm of fever yesterday, from noon till six o'clock ; afterwards slept tolerably ; tongue clean. Decoction to be continued.—29th, Has had no return of fever ; but vomited several times since yesterday morning. Tongue very foul. The purging powder, as prescribed on the 25th to be repeated ; and, after its operation, the other medicines to be resumed.—30th, Slept well. Easier to day.—31st, No return of fever ; but complains of griping, purging, and tenesmus. The decoction, with fifteen drops of tincture of opium in each dose, to be continued.

January 1st, 1797. Asleep. The medicines to be continued.—2d, No return of fever. Four stools, with griping. To have  $\bar{z}$ iss of castor oil ; and, after its operation, the other medicines.—3d, As yesterday ; but vomited frequently. The medicines to be continued.—4th, Fever returned last night, with pain of bowels. Medicines to be continued.—5th, Had again a paroxysm of fever in the night ; but, there

being no interpreter in the ward, and he himself a Dutchman, could get no satisfactory account of his situation. The medicines to be continued.—8th, Since last report, has been in the same variable state, and taking the same medicines. Had a paroxysm of fever last night. Complains of pain in the abdomen. To have  $\bar{z}$ ii of cathartic mixture; and, after its operation, the other medicines.—10th, Mr. Brydie gave over charge at the Hospital; and he came again under my care. Report: had a severe paroxysm last night, commencing at midnight. At present (eight P. M.) has febrile symptoms. Decoction of Peruvian bark to be continued as before.—11th, Has had almost constant fever since last report, with severe griping and purging. To have every two hours a draught composed of thirty drops of antimonial wine.—12th, Paroxysm commenced yesterday at two P. M. Had three stools. The draughts to be continued.—13th, (This day's report was by another practitioner, who visited him in my absence.) Fever yesterday for three hours. Five stools. One ounce of Peruvian bark, in a pint of decoction, to be taken in the day. At bed-time an anodyne draught. The other medicines to be omitted.—14th, Asleep. The decoction and draughts to be continued.—15th, Had a severe paroxysm yesterday. Medicines to be continued.—16th, Had another paroxysm; much griped and purged. The deco-

tion to be omitted. To have four ounces of purging mixture, and the anodyne draught to be repeated twice a day.—17th, Complains of violent pain of side, with difficult respiration; the liver feels indurated and enlarged. The draughts were ordered to be continued, and mercurial ointment, by friction, to be used; to have fowl soup.—18th, Pain somewhat abated; ointment and draughts to be continued.—19th, As at last report. The medicines to be continued —21st, Severely griped and purged, and passes blood. The ointment to be continued; to have a glyster of starch, with one hundred drops of tincture of opium in each, three times a day; the abdomen to be fomented.—22d, As yesterday; but mouth very sore, and fauces much swelled. The glysters and fomentations to be continued, and the ointment omitted; to have a gargle.—23d, Violent hemorrhage from the mouth; the consequence, probably <sup>2</sup>, of the omission of the ointment. To have a draught with fifty drops of tincture of opium and ten drops of elixir of vitriol, every two hours. The glysters and the gargle to be continued <sup>3</sup>.—24th, Hemorrhage stopped; tendency to coma;

<sup>2</sup> *Certainly.* C. M.

<sup>3</sup> If the quantity of tincture of opium here prescribed, by the mouth and by glyster, had been accurately administered, it would have amounted to nearly two ounces in the twenty-four hours. Making allowance for irregularities, it probably was not under an ounce and an half.



much reduced in strength; pulse 90 and feeble; liver feels enlarged, indurated, and œdomatous; foetid smell from the whole body. The draughts to be continued; and to have eight glasses of wine daily.—25th, Five stools. Pulse 110; much exhausted; comatose. The draughts to be continued every three hours, with seventy drops of tincture of opium. The glysters and gargle to be continued.—26th, Pulse 92. Had frequent hiccup and vomiting yesterday. Liver seems suddenly diminished in size. Coma remains. The draughts, with 100 drops of tincture of opium in each, to be continued. Also the glysters and gargle<sup>4</sup>.—27th, As yesterday. Medicines to be continued. Wine to be increased to twelve glasses daily.—28th, Pulse 100. Skin covered all over with a cold clammy moisture. The medicines to be continued.—29th, Pulse 94. Skin dry and hot. The medicines to be continued.—30th, Pulse 88. No stool for two or three days. The draughts to be continued; and to have immediately a glyster, with one ounce and a half of castor oil, and as much glauber salts.—31st, Pulse 92. The draughts to be continued.

February 1st, Pulse 106. Feels a little better. Draughts to be continued.—2d, Pulse 72.

<sup>4</sup> Eleven hundred drops in all, being above two ounces and two drachms, at sixty drops to the drachm.

Draughts continued. To have fowl.—4th, Continues better. Draughts to be continued.—5th, Pulse regular. The draughts to be reduced to four in the day, with eighty drops in each. The wine to be continued at twelve glasses.—12th. Draughts to be reduced to seventy drops in each.—16th, Wine to be diminished to eight glasses.—21st, Only three draughts in the day.—22d, Only two draughts in the day. 26th, Tincture of opium in the draughts to be diminished to fifty drops.—27th, When I discontinued attending him, he was completely recovered, with a good appetite, his only complaint being want of strength, the inevitable consequence of so tedious and severe an illness. He was taking two draughts daily, with thirty drops of tincture of opium in each, and eight glasses of wine, which, with exercise, and nourishing food, suitable to his condition, cannot fail to restore him, in a short time, to his usual strength. It is almost unnecessary to remark on the inefficacy of the old mode of practice, so long persisted in, in this case.

JR.

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REMARKS BY C. M.

THE routine practice of the hospital, and the new mode of practice, had, each of them, in this case, a fair trial; and the difference of their effects was very distinctly pronounced. The former

was employed from the 11th of December 1796, to the 17th of January, 1797, without producing the smallest benefit, but rather with an increase of the disease. The latter, which was commenced on the 17th of January, was immediately succeeded by an alleviation of symptoms ; and, notwithstanding a considerable degree of inaccuracy in its application, finally by a removal of the disease.

This inaccuracy arose partly from the imperfect state of the knowledge then acquired, respecting the effect of the diminution, suspension, or cessation of the action of the exciting powers ; partly from the necessity of conforming, in some degree, to the prejudices of the patient ; but more especially from the prescriptions of the gentlemen, under whose care this patient had been successively placed, not being wholly uncontrouled. Under all these disadvantages, however, it appears evident that, to the employment of the new mode of practice, imperfectly as it was applied, this patient owed his recovery, while, if the other had been persisted in, we may, from a very extensive analogy, presume that he would inevitably have lost his life.

It is of importance to remark the inaccuracies that were committed in this Case, and the consequences of them. On the 17th of January, the



frictions with mercurial ointment were commenced ; but, in what quantities, or at what intervals, the reports have omitted to state. From my experience of the effects of the application of this remedy, and of the cessation of its action, in other cases, I conclude, judging from the phenomena which here occurred, that the quantity employed consisted of an ounce or more in the twenty-four hours, and the intervals between the frictions of three hours or more. For if the intervals had not been too extended, the soreness of the mouth, and swelling of the fauces, which took place on the 22d, while the medicine was yet in use, would not have happened ; and, if the quantity had not been considerable, the hæmorrhage, tendency to coma, fœtid odor of the whole body, quickness of pulse, and hiccup, which occurred from the 23d to the 26th of January, in consequence of the cessation of the action of the remedy on the 22d, would not have taken place. It is to this error, then, of suddenly withdrawing the mercury on the 22d, without substituting a sufficient quantity of tincture of opium in its place, that the hæmorrhage, and all the other symptoms of disease, described from the 23d to the 26th of January, should be attributed. Nor was the quantity of tincture of opium prescribed, during any part of that period, exactly appropriate. On, and after the 26th, the prescriptions, if we except the two great intervals

between the doses, were excellently adapted to the condition of this patient ; and the effects produced were conformable.

The cold clammy sweats, which arose on the 28th of January, I have no doubt, were the effect of omissions, in the night, in taking his draughts, either from his own negligence, or that of his attendants. The negligence and bad faith of patients and of their attendants, indeed, may be said to constitute one of the most fertile sources of delusion, against which the medical practitioner has to guard himself. It is true that, in the practice of medicine, as a conjectural art, this consideration is comparatively of little consequence. But when we aim at prescribing remedies, according to scientific principles, and with a view to determinate effects, it is of the utmost importance not only that the greatest accuracy should be observed in their administration, but that we should not allow ourselves to be imposed upon by the assertions of persons, who, to cover their own perverseness or neglect, will report the grossest falsehoods. A remarkable instance of this disposition to deceive, will be found related in Case 41 of this collection.

I may take this opportunity of remarking that, in no situation, perhaps, can the faithful adminis-

tration of medicines be more relied on, or their effects be more correctly ascertained, than in the Hospitals in India. The natives, whose business it is to attend the sick, will generally enforce, with great accuracy, the orders of the physician. In this respect, I have experienced a most extraordinary degree of fidelity, resulting both from general habits of subordination, and from individual intelligence and integrity.

There are also other circumstances, which contribute toward the same end. The degrees of disease, and consequently the intensity of the remedies, being greater in India than in Europe, inaccuracy in their application would be more dangerous in its consequences. The same necessity, which there calls for the employment of more powerful agents, naturally leads both to more correctness in their administration, and to greater accuracy in observing their effects. These observations apply more especially to that species of practice, which, in the repetition of doses, and the alternation, or substitution of remedies, approaches to some degree of scientific correctness.

From the reports from the 17th to the 26th of January, but particularly of these two days, there is reason to believe that a suppuration of the liver had taken place, and that the matter was discharged by the bowels. At all events, the state of



that viscus was here ostensibly the motive for employing mercury. In India, as is well known, that remedy, but in very inadequate quantities, and at very improper intervals, has been used in hepatitis for many years<sup>5</sup>. Like other cathartics, it has been given internally as a purgative, to discharge morbid humours, or rubbed externally, under the notion of its producing benefit by some exclusive or specific action. This year (1796) for the first time, as far as my knowledge extends, it was applied, according to right principles, at proper intervals, in due quantities, and with a view to determinate effects. It was not, then, the affection of the liver in particular, which induced Dr. Robertson to have recourse to mercury upon this occasion; although, happily for the patient, the plan, as far as the mere *name* of the remedy is concerned, accorded with the common and avowed practice of India, in diseases in which that viscus is supposed to be principally affected. Judging from his declarations, as well as from his treatment of other cases, he would have equally employed it for the cure of fever, dysentery, or other acute disease, even where no affection of the liver was suspected to exist.

<sup>5</sup> Girdlestone's Essay on Hepatitis and the Spasmodic Affections of India.

## CASE XXVII.

*Anomalous Disease, cured by Mercury and Opium, by Dr. Robertson, in the General Hospital, Calcutta, in 1796-7.*

GOODLIP PRONASKI was admitted to the Hospital October 31st, 1796, His bowels had, for some time, been irregular. He had frequent purging, with blood, which stopped spontaneously, and was succeeded by obstinate costiveness, having had no stool for three or four days previous to his admission. At present he complains of violent pain of the loins, extending towards the shoulders; and difficult respiration. Pulse nearly regular. Tongue clean. No febrile symptoms. To take the following solution, in three equal portions; sal. glaub.  $\mathfrak{z}$  iss. tart. emet. gr. i. aq. commun.  $\mathfrak{z}$   $\times$  M. A blister to be applied to the loins.

November 1st, Has been much troubled with cough during the night; is otherwise better. To have, every three hours, a table spoonful of the following mixture; common oleaginous mixture, six ounces, tincture of opium two hundred drops. —2d, Complains of pain across the breast, with nausea. To have immediately one scruple of ipecacuanha, and one grain of tartar emetic;

and at bed time, an anodyne draught, with sixty drops of tincture of opium.—3d, Vomiting continues this morning. Complains of severe pain of breast and loins. To have a table spoonful, every two hours, of the following mixture; Saline julep twelve ounces, tartar emetic two grains, tincture of opium two hundred drops.—4th, Considerably better. The mixture to be continued. From this period he continued better till November 8th, when he had a severe return of the pain of his side, with cough. The saline mixture to be omitted, and the former oleaginous mixture to be resumed. Two drachms of mercurial ointment to be rubbed in daily.—19th, Mouth slightly sore. All symptoms of disease vanished. The medicines to be omitted, and to have a draught at bed-time with sixty drops of tincture of opium.—22d, Was attacked with frequent vomiting, and violent pain of the right side. Two drachms of mercurial ointment to be rubbed in, and a pill consisting of three grains of calomel, and one grain of opium, to be taken three or four times a day.—23d, The medicines to be continued.—24th, Complains of being much griped and purged, which he attributes to the pills. The pills to be omitted; the ointment to be continued; and a draught, with sixty drops of tincture of opium, to be taken at bed-time.—25th, The griping and purging continue. He complains of violent pain of the right side, and



of difficult respiration. The abdominal muscles feel remarkably tense. To have five grains of calomel and one grain of opium every three hours. The ointment and draught to be continued.—26th, Purging and griping less severe; otherwise as yesterday. Says he vomits the pills. To have a draught with fifty drops of tincture of opium, and thirty drops of spirit. vol. aromat. every hour. The pills and ointment to be continued.—27th, Asleep. The medicines to be continued.—28th, Mouth sore. Had two stools since yesterday. Griping nearly gone. The ointment to be omitted. Two grains of calomel and one grain of opium to be taken every three hours. The draughts to be continued.—29th, As at last report. The pills to be omitted, and the draughts to be continued.—30th, Vomited last night. Purging and griping easier. The draughts to be continued.

From this date he continued progressively to get better. The draughts were gradually diminished; and calomel, jalap, or a mixture with sal. cathart. amar. were occasionally given, according to circumstances. On the 24th of December, he was discharged cured.

J. R.

## REMARKS BY C. M.

THIS, like Dr. Robertson's other Cases, marks distinctly the difference between the effects of the old and the new modes of practice, as well as the progression of the change of medical opinions, which was then taking place in his mind. And if his prescriptions were not always exactly conformable to this change, it ought to be recollected that, in hospitals, and other situations, where several opinions are to be consulted, it will, in the present state of medicine, be frequently necessary to compromise.

From the result of this Case, as far as it goes, it may be inferred that the effects of the application of stimulant powers, in curing diseases, may often be rendered sufficiently certain, even when the seat of the disease cannot be exactly ascertained. There was no reason to suppose that the liver, nor was there any criterion to judge which of the viscera were, in this case, particularly affected.

It is a common stratagem of patients, as in the reports of the 24th and 26th of November, when they become tired or disgusted with their medicines, to pretend that the remedy, which they

wish to lay aside, occasions nausea, vomiting, purging, and other disagreeable symptoms, (see 41, and other Cases of this collection). The Physician should be particularly on his guard against giving credit to these assertions. When such symptoms do arise, it is always either from the intervals between the doses, as prescribed, being too long, or from the neglect of the patient or his attendants to conform to the directions given. Otherwise the whole doctrine, which I now offer to the public, is erroneous. With respect to calomel in particular, I have never known it to be succeeded by purging, and seldom by griping, when the doses have been regularly repeated at intervals of two hours or less ; nor in any case by vomiting. I do not, however, mean to say that the period of the duration of the action of each dose of any remedy is exactly the same in all persons. Probably it is shorter with children than with grown persons, and with some grown persons than with others. In mentioning two hours, therefore, as the period of the duration of the action of each dose of calomel, I mean that this appears to be the mean period with grown persons. But whatever variety may take place in this respect, it cannot affect the general principle, that, the repetition of the doses of medicines should be regulated by the duration of the action of each dose.



## CASE XXVIII.

*Obstinate Intermittent cured by Mercury and Opium, &c. by Dr. Robertson, at the General Hospital, Calcutta, in 1796.*

November 8, 1796. EDWARD GREENFIELD, of the 2d European Regiment, about twenty-six years of age, stout and of a healthy appearance, was attacked some days ago with febrile symptoms, in consequence of drinking too freely ; but only reported himself ill last night, when he was sent to the General Hospital. About nine P. M. he was attacked with the cold stage of an intermittent, which lasted till four o'clock A. M. At present he complains of head-ach and impaired appetite. Pulse quick. Costive. To have immediately thirty grains of jalap, and six grains of calomel.—9th, Cold fit yesterday returned at ten A. M. and was succeeded by the hot stage at two P. M. during which time he vomited frequently. Febrile symptoms continued during the night. Still costive. To have two ounces of the cathartic solution<sup>1</sup> every two hours. Nine P. M. cold stage commenced at four P. M. and continued about two hours ; his skin was hot and dry for about an hour and an half,

<sup>1</sup> The formula is given in a Note to Case XXVI.

and has since been covered with a profuse perspiration. Is much troubled with retching and vomiting. Has had only one stool, and complains of violent pain of the abdomen. To have immediately a cathartic glyster, a draft of tincture of opium, and peppermint water one ounce, to be taken immediately, and another at twelve o'clock. The abdomen to be frequently fomented.—10th, Had one stool after the glyster. No pain of abdomen. Took both drafts. Had no vomiting since he took the first, but did not sleep any during the night. Pulse 76; tongue moist; skin cool; but much thirst. To have a drachm of red Peruvian bark every two hours. The glyster and draft to be repeated at night.—11th, Had a severe paroxysm last night. At present shews a tendency to delirium. Pulse 110; tongue foul; respiration difficult. A blister to be applied to the head. Three grains of calomel and one grain of opium to be given every three hours, and a laxative glyster immediately. Eight P. M. Has vomited frequently; has taken three of the pills; pulse 130. To have eight grains of calomel, and four grains of opium, every three hours. Five glasses of wine.—12th, Vomiting ceased. Tongue still foul, but moist. Pulse 84. Has had no stool. Tendency to coma. To have a laxative glyster immediately. The pills to be continued as yesterday, and the red Peruvian bark. Eight P. M. pulse 88, tendency to coma gone off. Had one stool soon after the glyster was

given. Thirst continues. Tongue rather cleaner. The glyster to be repeated, and the other medicines continued. To have seven glasses of wine daily.—13th, Pulse 108. Has had two copious evacuations since the glyster was given. Complains still of great thirst. Tongue clean ; respiration difficult. The medicines to be continued as before, and a blister to be applied to the breast.—14th, 140, and feeble ; cold perspiration over the extremities ; tendency to delirium ; tongue parched ; had no stool since last report. The pills, and the Peruvian bark every hour to be continued, and the glyster to be repeated. To have nine glasses of wine in the twenty-four hours.—15th, Tendency to delirium continues ; skin hot and dry ; tongue blackish and parched ; pulse 120 ; no stool from the glyster. Half a drachm of jalap, and half a drachm of cream of tartar, to be taken immediately. The pills of calomel and opium, and the Peruvian bark to be continued. P. M. Pulse 104. Skin still hot and dry. The medicines to be continued ; and a glyster, containing two ounces of Glauber's salts, one ounce and a half of castor oil, and two drachms of Venetian soap to be given immediately.—16th, Had one copious stool after the glyster, and slept tolerably well during the night. Pulse 100 ; skin moist ; tongue still foul. The pills and Peruvian bark to be continued ; and the glyster to be repeated at noon, if he should not previously have a stool.—17th, Pulse 88 ; skin



cool and moist ; tongue not so foul ; had a stool last night ; slept soundly the whole night, and has ate some breakfast this morning with a good appetite. The Peruvian bark to be repeated ; and pills, containing each four grains of calomel and two of opium. The glyster to be repeated in the evening.—18th, Pulse natural ; slept sound all night ; tongue clean ; skin soft and moist. The medicines to be continued.—19th, As at last report ; continue the medicines.—20th, Gums sore ; convalescent. The medicines to be continued.—21st, Reduced the strength of the pills to two grains of calomel, and one grain of opium, three or four times a day. The medicines were continued ; the mouth remained slightly sore ; and the patient was apparently recovering, till Nov. 30th, at three P. M. when a cold fit came on, and went through the regular stages of an intermittent paroxysm, accompanied with vomiting and head-ach. It went off about ten P. M. Pulse at present rather frequent. The Peruvian bark and pills <sup>1</sup> to be continued.

December 1, No return of fever.—2d, at four P. M. paroxysm returned, accompanied by vomit-

<sup>1</sup> Of what strength were the pills ? From the literal acceptance of the reports, they would consist of two grains of calomel and one grain of opium, while, from the state of the patient, they ought to have consisted of more. We must, I think, abide by the former. C. M.

ing, and lasted till about eleven. Pulse at present frequent; tongue foul; some nausea. Half a drachm of Peruvian bark, with twenty drops of tincture of opium, and twenty drops of antimonial wine, to be taken every hour. The pills to be continued.—3d, No return of fever. Costive. To have ten grains of calomel, and six grains of cathartic extract; the other medicines to be continued.—4th, Had a paroxysm yesterday from four P. M. attended with vomiting, which continued till nine. Had three stools after the physic. The bark and the pills to be continued.—5th, No return of fever. The pills and bark to be continued. To take immediately a draught, consisting of two drachms of vitriolic æther, sixty drops of tincture of opium, and two ounces of water<sup>2</sup>.—6th, Fever yesterday from four P. M. till ten, with much vomiting during the cold fit. The pills to be omitted; one drachm of Peruvian bark to be taken every two hours, and one grain of pure opium every three hours.—7th, Had a slight paroxysm this morning about three o'clock. At present pulse frequent and tongue foul; skin hot and dry. To have five grains of calomel and one grain of opium every three hours. The bark to be continued; and a draught, with eighty drops of tincture of opium, and forty drops of antimonial

<sup>2</sup> The accession of the fever was apparently expected at this hour.

wine, to be given at twelve o'clock, and repeated at bed-time.—8th, Fever returned at six P. M. and lasted three hours, but milder than former paroxysms. No stool yesterday. To have three purging pills. The pills and draughts to be continued.—9th, Complains of bad taste and nausea. Had no paroxysm yesterday. The pills and bark to be continued, and, if a paroxysm should occur, the draughts.—10th, Slight paroxysm about seven P. M. and of shorter duration. Continue the medicines.—11th, No fever. Continue the medicines.—12th, Slept well in the latter part of the night and morning. Had a slight paroxysm in the early part of the evening. The medicines to be continued.—13th, Had no fever. The bark and draughts to be repeated, and the pills to be omitted.—14th, Another slight paroxysm. The medicines to be continued.—15th, No return. Continue.—16th, Paroxysm mild and of short duration.—The medicines to be continued.—17th, No fever. Continue.—18th, Another slight paroxysm. Continue.—19th, Has considerable heat over the body; pulse frequent; had no stool yesterday. To have immediately six grains of calomel and half a drachm of rhubarb. The Peruvian bark to be continued.—20th, Paroxysm came on about four P. M. yesterday. Vomited much. Had three stools yesterday, and one this morning. Pulse frequent. No head-ach. One drachm of Peruvian bark, with ten drops of tincture of opium to



be taken every two hours.—21st, Had slight fever in the night. At present pulse frequent; tongue foul, and clammy moisture over the skin. The bark to be continued as yesterday, and to have one grain of calomel every two hours.—22d, Paroxysm came on about one P. M. yesterday, and lasted till five or six in the evening. Vomited a great deal. Had a natural stool to day. The medicines to be continued.—23rd, Had no fever. Was severely griped yesterday, and had several loose stools, at present complains of nausea; pulse frequent; skin clammy; tongue foul. The medicines to be omitted, and to have a draught every two hours, with 60 drops of tincture of opium, and 20 drops of antimonial wine.—24th, Fever came on at four P. M. and lasted till ten. Vomited a good deal. Sweated freely during the night. Had two copious stools since last report. Pulse regular. The bark and draughts to be repeated.—26th, Fever came on at three, and lasted about two hours. The medicines to be continued, and to have a glyster.—27th, Cold fit last night for about an hour and a half. Has been hot and feverish ever since. Pulse regular. Had no stool since the glyster. To have two ounces of the cathartic mixture. Afterwards repeat the other medicines.—28th, Had an attack last night about five P. M. which lasted till nine or ten. Vomited a good deal. Slept well afterwards. Had a stool this morning. Pulse regular. The medicines to be continued as before.—29th, Had

a very slight attack. The medicines to be continued.

January 3d, 1797. He continued free from fever; taking daily the medicines as above prescribed. Complains of costiveness. To have 8 grains of calomel and 15 grains of jalap.—8th, Had a return of fever yesterday about 11 A.M. which lasted 10 hours. Vomited a great deal. The bark and draughts to be continued.—9th, No return of fever. Continue.—10th, A slight paroxysm. Continue.—12th, Cold stage came on yesterday very severe at half past 2 o'clock, and lasted till four, when the hot stage acceded, followed by the sweating. The medicines to be continued.—14th, Had a severe paroxysm after I saw him, on the 12th, and another yesterday. The medicines to be continued.—16th, Had another severe paroxysm. The medicines to be continued, and the mercurial friction to be used. He continued using this course, and remained free from fever till the 23d, when he had a severe paroxysm at two P. M. attended with violent head-ache and vomiting. The medicines to be continued, using two drachms of mercurial ointment three times a day.—25th, Mouth affected. Continue the medicines.—27th, Mouth very sore, with ptyalism.—The draughts to be continued, but repeated three or four times a day. Half a drachm of the ointment to be rubbed four times a day, and to

have decoction of bark.—28th, Spit a great deal of blood last night. Complains of pain across the abdomen, with nausea. Pulse frequent. Skin moist and clammy. The ointment to be omitted. The decoction of bark to be continued; and to have a draught with seventy drops of tincture of opium every three hours.—29th, Hemorrhage continues, and has been constant since last report. Great loss of strength, with tendency to delirium. Pulse quick. Skin dry and cool. To have the following draught every three hours, decoction of Peruvian bark, two ounces; elixir of vitriol twenty drops, and tincture of opium 100 drops. A common gargle, and wine twelve glasses daily.—30th, Hemorrhage ceased yesterday afternoon at five o'clock. Tongue foul. Skin clammy. Pulse quick. Vomited the draughts at first. The medicines to be continued.—31st, Has not vomited. No stool for two days. The medicines to be continued, and a glyster to be given, containing two ounces of castor oil, and one ounce and a half of Glauber's salts.

February 1st, Pulse very frequent. Much emaciated, had no sleep all night. To have two ounces of decoction of bark every hour, and a draught, with 100 drops of tincture of opium, and twenty drops of elixir of vitriol every three hours.—2d, Pulse 104. Slept better. Complains of great loss of strength. Clamminess of skin



remains. The decoction and draughts, but with the addition of five drops of elixir of vitriol to each, to be continued as before.—3d, Had a slight Hemorrhage from the mouth last night. Pulse 96. The draughts and decoction to be continued.—4th, Pulse 100. Otherwise rather easier. The medicines to be continued.—5th, Easier. The medicines to be continued.—6th, No fever. Hemorrhage again, but only from the gums. Pulse 100. The medicines to be continued.—7th, Pulse still 100. No more bleeding from the gums. The medicines to be continued.—8th, Pulse 90. Otherwise better. The medicines to be continued.—11th, Wine reduced to ten glasses.—12th, Had a severe paroxysm of fever yesterday at noon, which lasted till evening, and was attended with vomiting. The medicines to be continued.—13th, No return. Continue.—14th, No return. Appetite increasing. The medicines to be continued; but the tincture of opium in each draught to be reduced to seventy drops, and the elixir of vitriol to twenty, and the draughts to three in the day.—18th, Continues convalescent. The draughts, with sixty drops of tincture of opium only, to be given twice a day. Decoction to be continued.—20th, Appetite good. To have roasted mutton for dinner. The medicines to be continued. 21st, Nearly well.—22d, Medicines to be omitted.—25th, Discharged from the Hospital, completely cured.

The temporary recovery of this patient, under the first course of stimulants, showed clearly their utility ; his subsequent relapse, either that they had not been sufficiently pushed, or properly administered ; and their ultimate powerful effects totally removed the disease.

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#### REMARKS BY C. M.

CANDOUR is so conspicuous a feature in Dr. Robertson's reports, that the analysis of them always affords the means of fair comparison between the different modes of practice. It may be proper to observe, that this gentleman has been many years a practitioner in India, is a diligent and accurate observer, and has been generally engaged in active service<sup>3</sup>. To the experience derived from these sources, and the speculative knowledge resulting from a liberal education in the most eminent schools of medicine, he unites that proper degree of scepticism which does not permit him to be led away by hypotheses, not founded on rational and correct induction.

<sup>3</sup> He was chief of the Medical Staff in the Island of Java, whilst it remained under the British dominion.

The concluding observations, as well as the whole tenor of this report, shew what little value he put upon the common practice, to which he had been for so many years accustomed, although obliged by the laws of subordination to employ it. From the clashing of different doctrines evidently arises that indecisive and mixed practice, which characterises this, and, in some respects, many others of the cases here published. To the bark, which forms a principal ingredient in the ancient practice, I have no other objection than that it requires a greater quantity of it than any patient can possibly swallow, to cure, in a moderate length of time, a disease of moderate degree. To the purgatives, emetics, and other such means, I object, because, if they do not produce absolute evil, they interfere with a more regular and efficacious plan of cure. Glysters, as they are not liable to the same inconveniences, may be admitted as generally useful ; and blisters, which are inconsistently employed in the old practice, are perfectly conformable to the rules of the new.

This fever, it will be observed, yielded to the calomel and opium, given from the 11th, to the 17th, of November. That the effect was not more speedy and decisive, although this might have resulted from the obstinacy of the fever, gives rise to suspicions of irregularity on the part



of the patient, or attendants; and particularly from the state of the pulse on the 14th, and 15th, (the morning being the time of visiting) I should suspect an omission on the preceding nights. From the decisive change on the 16th, and 17th, however, it is probable that these omissions were but partial. The soreness of the gums, &c. which on the 20th, succeeded the subduction of the mercury on the 17th, and perhaps a subsequent irregularity in its administration, evince, that a great deal of the remedy had been previously employed. These symptoms, together with the recurrence of the fever on the 30th November, shew that the remedy was too abruptly subducted, and administered at intervals too distant. That the diminution on the 17th, and 21st, although there might have appeared sufficient reasons for it at the time, was too sudden, is manifest from its consequences. And the interval of three hours between the doses of mercury is, in all cases too long.

On the 30th of November, the fever returns, and the common practice is in vain resorted to. But on the 7th of December, five grains of calomel, and one grain of opium, are prescribed, every three hours; and this is followed by a mitigation of the paroxysms. On the 13th of December, however, a change is made in the treatment; for which I can only account, by supposing

some interference on the part of the senior medical officers; the mercury is laid aside. From that time to the 16th of January, the patient continues constantly labouring under the disease, the paroxysms, varying both in severity and frequency of recurrence. And it was not until mercury was again resorted to, that the disease was completely removed.

This happened on the 16th of January, 1797. After that two paroxysms of fever occurred; one on the 23d of January, and one on the 11th of February. But the disease, afterwards occasioned by the diminution, suspension, or cessation of the action of the mercury, from the sudden subduction of the remedy, and the too long intervals between the doses, proved troublesome. The symptoms which occurred on the 28th, and 29th of January, might have been prevented by the more gradual diminution of that remedy, the intervals between the doses being shorter, or by the administration of the tincture of opium at intervals more appropriate. With all these disadvantages, however, the superior utility of this practice, if my perceptions do not labour under a strong bias, are, in this case, conspicuous. But under a due and regular application of the exciting powers, this fever, which continued upwards of three months, might, I am well convinced, have been cured in less than as many weeks.

Some inaccuracies are observable in this report. The quantity of mercury used from the 16th, to the 23d of January, for instance, is not specified. But, if it be considered, that, in prescribing for forty or fifty patients of a morning, the dispatch with which the reports of their cases are entered in the books of the hospital, cannot admit of much deliberation, it will appear rather surprising that the omissions are so few.

The duration of this fever was about fourteen weeks. Its obstinacy, under a course of remedies so potent, evinces the existence of a considerable degree of what is usually termed visceral obstruction. Symptoms, indicating a morbid state of the viscera usually precede, accompany, or succeed intermittent, and other fevers. But, in such cases, the Peruvian bark cannot be supposed, excepting by those who adhere to the idea of the *specific* action of remedies, to be capable of effecting a cure. And neither, as has erroneously been supposed by others, is it capable of producing, by the cessation of its action, any great sum of disease. For, as, in general, powers which are capable of producing disease, are also capable of curing it; so, in general, powers, which are incapable of curing disease, are also incapable of producing it.



## CASE XXIX.

*Ptyalism produced apparently in Consequence of the Suspension of the Action of Opium, communicated by Dr. Robertson.*

January 17th, 1797. JAMES METCALF, 4th company, 2d regiment, was admitted yesterday to the Hospital, with griping, purging and tenesmus, for which he had taken *ol. recini* in the barracks. To have two ounces of cathartic mixture, with twenty drops of tincture of opium in each dose four times a day.—18th, As at last report. The mixture with thirty drops of tincture of opium, to be repeated. The abdomen to be fomented.—19th, No better. The mixture to be omitted, and to have a scruple of jalap, and six grains of calomel. At bed time, a draught with fifty drops of tincture of opium. Fomentations.—20th, Easier. The draughts to be repeated three or four times a day. The fomentations to be continued.—21st, The same. Continue.—22d, Purging less, but pain of abdomen increased. Continue the medicines.—23d, and 24th, Medicines were continued, and two ounces of decoction of Peruvian bark prescribed every three hours.—25th, Had fever last night. The medicines to be continued.—26th, The medicines to be continued.—27th, Mouth sore, and spits considerably.

After this he got better, the draughts were for some time continued, and on the 8th of February, he was discharged. This case is given only to shew the effects of opium on the mouth.

J. R.

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REMARKS BY C. M.

ONLY six grains of calomel had been used by this patient, and that eight days previous to the commencement of ptyalism. This symptom cannot, therefore, be rationally imputed to that remedy (see remarks on the following case), but to the cessation of the action of the opium.

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CASE XXX.

*Ptyalism produced apparently in Consequence of the Suspension of the Action of Opium.*

February 3d, 1797. Hewit, 2d. regiment, was seized two nights ago with giddiness, chilly sensations, and other febrile symptoms, preceded by costiveness. This morning and all yesterday, had loose stools with griping. Pulse frequent; tongue foul; has a tremor over his body; and complains

of pain of breast upon any occasion. To have four ounces of the purging mixture, with sixty drops of tincture of opium ; and at bed-time a draught of seventy drops of tincture of opium, and thirty drops of antimonial wine.—4th, Had a slight paroxysm of fever last night ; pulse 70 ; tongue clean ; had a hemorrhage last night from the nose. To have a draught four times a day, with fifty drops of tincture of opium.—5th, Violent hemorrhage from the upper lip, in consequence of a cut received three days before admission. The lips of the wound to be brought into contact and secured with adhesive plaster ; the draughts to be continued.—6th, Hemorrhage continued during the night ; fever also returned about nine, and lasted the whole night. The draughts to be continued, and to have two ounces of decoction of bark every two hours.—7th, Asleep. The medicines to be continued.—8th, Constant vomiting and nausea ; had no stool these five days. The medicines to be continued ; to have immediately a purging glyster, with two ounces of castor oil, and two ounces of Glauber's salts.—9th, No report.—10th, Had one stool from a glyster repeated last night ; pulse 80 ; had fever. The decoction and draughts to be continued.—11th, Asleep. The medicines to be continued.—12th, Has had no stool since the 9th ; complains of constant spitting as if salivated, with a slight tenderness of gums ; but no pain or swelling of the fauces. To have a



glyster, with two ounces of castor oil, and two ounces of Glauber's salts ; the medicines to be continued.--15th, Better. The medicines to be continued.—16th, Gums and mouth tender and sore, and flow of saliva continues. The medicines to be continued.

This case is also given to shew the effects of opium in producing ptyalism. The remainder of it is uninteresting, and is therefore omitted. The ptyalism continued till the 26th of February.

J. R.

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REMARKS BY C. M.

HERE no mercury, in any shape, was administered previous to the commencement of salivation ? Was the ptyalism in this and the preceding case, then, really the effect of the diminution, suspension, or cessation of the action of the opium ? There are strong reasons for believing it was ; 1st, no other power was applied, to which that effect could be attributed ; 2dly, ptyalism, as in Lote's Case, by Dr. Yates (XXI.), and in Case XXXVIII. of this Collection, has been distinctly observed to arise from the diminution, suspension, or cessation of the action of opium.

We must either admit the facts as conclusive, or we must suppose, that these patients had been secretly using mercury. But this supposition is exceedingly improbable, for patients are seldom desirous of using more of this remedy than is prescribed for them; and if they were, according to the regulations of the Hospital, it would have been very difficult for them to have procured it. Beside the soreness of mouth, in these two cases, was not accompanied, as far as can be inferred, with that ulceration of the gums, which indicates the cessation of the action of mercury.

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### CASE XXXI.

*Hepatitis, cured by Mercury and Opium, by Dr. Robertson, at the General Hospital, Calcutta, in 1797.*

January 28th, 1797. JOHN HENNOO, a stout man, about twenty-eight years of age, was admitted to the Hospital. When I first saw him on the 29th, he complained of violent pain of the right side, with frequent stools. A blister to be immediately applied to the side, and to have two ounces of the cathartic mixture every two hours. —3Qth. Pain continues, extending down the loins;

pulse frequent ; face flushed ; skin hot and dry ; tongue parched. To have a pill with three grains of calomel and one grain of opium every three hours ; at bed-time a draught with thirty drops of tincture of opium and thirty drops of antimony wine.—31st, Pulse 92 ; symptoms as yesterday, with frequent loose stools. Medicines to be continued.

Feb. 1st. Pulse 104 ; spits some blood ; had only three loose stools ; otherwise as yesterday. The medicines to be continued ; and half a drachm of mercurial ointment to be rubbed in, four times a day.—2d, No return of hemorrhage ; had three stools ; pain of side less severe ; tongue foul ; pulse 100 ; face less flushed. The medicines to be continued.—3d, Only one stool ; otherwise as yesterday. The medicines to be continued.—4th. Better ; pulse 104. The medicines to be continued.—5th, No report.—6th, Pulse 90 ; pain of side easier ; only two stools ; mouth slightly affected. The medicines to be continued ; but the mercurial ointment (half a drachm) to be rubbed in only three times a day.—7th, Asleep. The medicines to be continued.—8th, Pulse 88 ; pain of side easier ; stools more frequent ; face flushed ; griping severe. The pills to be omitted ; the ointment to be continued : and to have a draught with fifty drops of tincture of opium every three hours.—10th, Pulse 92 ; symptoms not



abated. The ointment to be omitted, and the draughts to be continued.—11th, Pulse 90; mouth very sore; fauces swelled, and salivation copious. The draughts to be continued, and to have an electuary composed of equal parts of cream of tartar and flowers of sulphur, with as much syrup as will give it a consistence; of which a tea-spoon-full to be taken three or four times a day.—12th. Pulse 124; no stools, nor pain. The medicines to be continued.—14th, Pulse 106; will not speak, but points to his abdomen; indicative of pain. The medicines to be continued.—15th, Still refuses to speak, apparently from the pain occasioned by the affection of the mouth and fauces. The electuary and draughts to be continued.—16th, Seems much better. The medicines to be continued.—17th, Has had no stool for three days. The electuary to be omitted; the draughts to be continued, and to have a scruple of jalap and six grains of calomel.—18th, The draughts to be continued.—23d. Has been convalescent, and the draughts have been daily repeated since last report. Has now no complaint but soreness of the mouth, which is also getting better apace.—27th. When I ceased doing duty at the General Hospital, his medicines were all discontinued, and he was fit to be discharged, completely cured.

I all along considered this as a case of inflam-

mation of the liver, the more particularly as it was attended with great depression of spirits and short dry cough. By all parties I believe it would have been considered as an inflammatory affection of some of the viscera, which, by the common rules of practice, would have required blood-letting, and other modes of evacuating the humours. That he might not have recovered, even under that treatment, I will not take upon me to assert; but, from a recollection of results in similar cases, I will venture to affirm, that the debility, arising from the evacuant plan, would have more obstinately resisted all medical treatment than the original disease, for which it might have been used.

J. R.

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REMARKS BY C. M.

THE observations applied to some of the preceding cases, respecting the subduction of the remedies and the intervals between the doses, will equally apply to this case. The affection of the mouth, which occurred on the 6th of February, and all the subsequent symptoms of debility, such as the frequency of the pulse (124) on the 12th, might have been prevented by a more correct administration of the remedies, according to the rules laid down; especially by more frequent, or larger doses of

the laudanum, as a substitute for the mercury. Cream of tartar and sulphur, exhibited in the form of an electuary on the 11th of February, which are usually given as *antidotes* to mercury, are not efficient in any quantities that patients can swallow, to prevent or remove the bad effects of the cessation of the action of that remedy.

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### CASE XXXII.

*Case of exhausted Constitution, with some Affection of the Heart, which terminated fatally, communicated by Dr. Robertson.*

JOHN DOOKAS, far advanced in years, of a sallow complexion, and apparently much exhausted ; had been frequently, for two or three days at a time, in the Barrack Hospital, for slight bowel complaints. He reported himself sick on the 11th of February, and remained in the regimental sick-room till the morning of the 12th, when he was sent to the General Hospital. I did not see him till the morning of the 14th, but was informed he had got on the 13th two anodyne draughts and a glyster.

Feb. 14th. Complains of pain in the region of the bladder, with difficulty in making water ; has



frequent white stools, with tenesmus; respiration laborious; pulse frequent; particular tension of the whole abdomen; is much debilitated and emaciated. To have a draught three times a day with fifty drops of tincture of opium, and a starch glyster, with one hundred drops of tincture of opium two or three times a day; two drachms of mercurial ointment to be rubbed in, and the abdomen to be fomented; to have sago and wine.—15th, Symptoms somewhat relieved; but pulse weak. The medicines to be continued, but with an addition of forty drops of tincture of opium to each glyster, and one drachm of mercurial ointment to be rubbed four times a day.—16th, Pulse only 62, and intermits after every second pulsation; symptoms as at last report, but thinks the pain in the region of the bladder easier. The medicines to be continued.—17th, Pulse only 52, and intermitting as yesterday; says he feels easier. The medicines to be continued; but to have draughts, with sixty drops of tincture of opium in each, four times a day.—18th, Pulse to-day 68; intermissions more irregular; sometimes after the 3d, sometimes after the 5th, and 7th pulsations; says he vomits frequently; had four stools; does not complain of any particular pain. The medicines to be continued.—19th, Pulse 76; does not intermit, but is extremely languid; only vomited twice since he had the draughts yesterday; has no pain in the region of the bladder; had four

stools. The draughts, with seventy drops of tincture of opium in each, and the ointment, to be continued, but the glysters to be omitted.—20th. Pulse 78, and feeble; but does not intermit; otherwise as yesterday. The draughts and ointment to be continued.—21st. Pulse 76; appears comatose, and is frequently attacked with hiccup. The medicines to be continued.—22d, Died at four, A. M. having continued comatose, with frequent hiccup, since last report.

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#### APPEARANCES UPON DISSECTION.

The whole of the intestines were found in a state of inflammation, tending to gangrene. The liver and other abdominal viscera were sound, excepting the omentum and top of the bladder, which were a little inflamed. Not a drop of fluid was found in the *pericardium*. On the surface of the heart were several incrustations of a cretaceous appearance; and the coats of the auricles and larger blood-vessels were remarkably thin and inelastic.

From the great degree of exhaustion in this case, the effect apparently of old age, it is, I think, unlikely the patient could have recovered by any terrestrial agency. However, I am of opi-

nion, it is one of those cases, in which the practice, resulting from the principles of the doctrine of excitation, might have been pushed to a much higher degree ; and, though it would in all probability have ultimately failed, it might, by a short prolongation of existence, have tended to throw something in the scale of the corroboration of a doctrine, that, in despite of every opposition, will finally be established. The effect the increase of the stimulant powers had on the pulse, is worth remarking ; and from that alone I am induced to think I did wrong, in not increasing their force to a much greater degree.

J. R.

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REMARKS BY C. M.

From the state of the pulse, and that of the heart, and larger blood-vessels, it would appear, that the whole circulating system of this patient was in that state of decay, which did not admit of the hope of more than a temporary repair, or rather support, by even the most accurate application of principles, compatible with the present state of our knowledge. This, I think, would consist more in shortening the intervals between the doses, than in increasing their force.

*The five following Cases are by the Editor.*



## CASE XXXIII.

*Experiment, shewing that Salivation, &c. do not arise from the immediate Action, but from the Diminution, Suspension, or Cessation the Action of Mercury; and shewing the Effect of the Substitution of Opium for Mercury; by the Editor, in 1797, in Bengal.*

IN February, 1797, I determined, in order to remove some doubts yet existing in my mind, respecting the effects of sleep in interrupting the progression of phænomena, to make the following experiment. I rubbed, successively, on all parts of my body, two drachms of mercurial ointment, regularly every two hours, day and night, excepting the hours of sleep. This course I continued for twelve days, during which time, the quantity rubbed in amounted to two pounds and four ounces of the strongest mercurial ointment.

On the second day I found that, by diminishing or suspending the action of the mercury, I could induce salivation, or various degrees of soreness of the mouth, &c. for, if I diminished the quantity, or prolonged the intervals between the doses much beyond two hours, I could perceive these

symptoms immediately commencing. During this process, I eat more heartily than usual, was cheerful, and went abroad several times to dinner. As I could not, upon these occasions, conveniently rub the ointment at the regular periods, I carried in my pocket, pills consisting each of half a grain of opium, of which I generally took three, but sometimes only two, every half hour, as a substitute for the mercury. The number of pills were regulated by their effects in preventing the consequences of the suspension of the action of the mercury ; and this I judged of by my sensations in general, but particularly by those of my mouth.

The pills were always a sufficient substitute for the ointment. By omitting both, a bleeding of the gums, &c. was induced, which was as certainly stopped by the re-application of either. I am well convinced, that by withholding entirely the pills and the ointment, and substituting at the same time no other exciting power, I could, at any period of the twelve days occupied in this experiment, with perhaps the exception of the first day, have, in the course of a very few hours, induced a fatal hemorrhagy.

During the periods of sleep, which were with me frequently eight hours, and the sleep sound, no degree of affection of the mouth took place. I al-

ways took care to apply the ointment at waking, and as often as I awoke.

At the end of twelve days, being now perfectly satisfied with the result of the experiment, I resolved gradually to diminish, and finally to withdraw the ointment. But wearied out by the tediousness of this process, I at length turned careless with respect both to the quantity and the intervals ; and, by too abrupt a procedure, occasioned a salivation, which terminated in the usual manner.

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#### REMARKS.

The result of this experiment is to confirm the inductions I had formerly made, respecting the effects of the continued action, and of the diminution, suspension, or cessation of the action of mercury. It afforded a new demonstration, or rather a series of demonstrations, that by diminishing, or suspending, or withdrawing the action of the mercury, all the symptoms of the disease, which usually succeed its application, might, at any period after the first day, have been, in the course of a very few hours, induced ; and that by the continuation of its action, or the substitution of the action of an agent equally powerful, all these symptoms of disease could be prevented or removed. They



were at length, by an indiscreet diminution of action, allowed to arise.

The identity of the effect of the action of opium and mercury proves also an identity in the mode of operation of these two powers.

From this experiment, it appears, that sleep, if it be sound, suspends the progression of phænomena.

Although, for my own part, I am of opinion, that a particular succession of phænomena being, in any one instance, clearly constituted, it is just to conclude, that in every similar instance, the same succession of phænomena will always take place; yet I would not, from a single experiment, venture to give any general conclusions to the public. But having obtained similar results in several hundred cases, both previous and subsequent to this experiment, I have now no hesitation in regarding them as demonstrated truths.

It may here be proper to remark, that, although the experiments, which I have made, on this and other occasions, shew, that opium is a sufficient substitute for mercury, they do not shew either that it is the most appropriate substitute, or what is the relative intensity of action of the two remedies. To ascertain this with sufficient accu-

racy, and to establish rules for their mutual substitution, will require many more experiments and observations.

In making this experiment, the ointment was not rubbed in with that unnecessary violence, which is generally practised in using mercurial frictions. It was gently rubbed, each time, over a certain extent of surface, and, when equably diffused, the part was covered with flannel. In either way, the quantity which may come into activity cannot be accurately ascertained; nor was it necessary for the object in view that it should. It was sufficient, that, on an average, nearly the same quantity should come into activity at each rubbing; and there is reason to believe that this was the case. The ointment was never twice rubbed upon the same part of the skin, without its having been previously washed with warm water and soap. For the purpose of more effectually keeping the skin free, the warm bath was also frequently used in the course of this experiment.

This mode of using the mercury, although inelegant, was sufficient to illustrate and confirm many of the results which had been previously ascertained, and to throw some light upon the effects of sleep, in interrupting the progression of phænomena. Had greater precision been re-

quired, there is no doubt that the internal exhibition of calomel would have been preferable.

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### CASE XXXIV.

*Fever, and some obstinate Effects of the Misapplication of Mercury, cured by Mercury and Opium.*

August 9th, 1798. Having arrived on board the *Busbridge*, East Indiaman, off Kedgerree, on her return to England, I learnt that the crew of that ship had for some time been very sickly, and that, for the last four days, one of them had died each day. The prevailing disease was a fever, sometimes intermittent, sometimes remittent, and sometimes of the continued form. Several were still in danger.

On the morning of that day, Mr. C——ll, fourth officer of the ship, had been sent ashore to Kedgerree, several leagues distant, with a party of men, to bury the boatswain. During this excursion, he underwent a long exposure to the influence of the sun and rain. Upon his return on board in the afternoon, he was seized with a violent paroxysm of fever, similar to those which



had proved so fatal to the ship's company. At his own request I undertook his treatment.

Considering the disease as very violent, and the patient being young and athletic, I began by prescribing eight grains of calomel, and four grains of opium, every three hours, reducing the quantity at times to six and four grains of the former, and three and two grains of the latter, and increasing them again, as I judged the paroxysms either to diminish, or to increase in violence. It would appear, however, that I had not estimated the force of the disease sufficiently high ; for, notwithstanding the great quantity of these remedies, that, under the constant exhibition of them in the proportions above stated, must, in that time have been given, it was about a fortnight before the disease was overcome. Afterwards, the weather being very unfavourable, his cabin almost constantly wet, and the attendance sometimes unavoidably irregular, a troublesome affection of the mouth ensued, and continued for several weeks. He also suffered a relapse, and was cured in the same manner as at first.

When his mouth had become very sore, I judged it necessary to desist entirely from the use of mercury : and opium in doses of three, four, and even five grains, was given as a substitute at similar intervals. He had formerly used great quantities

of this remedy, was very fond of it, and took it privately even in greater quantities than was ordered. Blisters were also occasionally applied.

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REMARKS.

IN the treatment of this Case, a very considerable error was committed. The intervals between the doses, for some reason which must have appeared to me good at the time, probably arising from surrounding prejudices, or from situation, consisted of three hours instead of two. Notwithstanding that this error must have been partly the occasion of the disease not yielding sooner, there is no doubt, however, from the fate of the others, who were at the same time similarly affected, that this patient owed his life to the energy of the mode of treatment pursued<sup>1</sup>. This, therefore, like some others of the Cases here published, is given, not as an example of any thing like an approach toward the correct application of principles, but as an instance of the superiority of a very imperfect application of them, to the common mode of practice.

<sup>1</sup> Those of the crew, who were seized with the same fever, and were not treated in a similar manner, were dying at the rate of one a day. Almost all the boat's crew, who went ashore at the interment, fell a sacrifice: I believe, indeed, every one.

By this course, a swelling and pain of one knee, together with a contraction of the tendons, and some other symptoms, the consequence of the misapplication of mercury, many years before, in China, were completely cured; and he declared himself, at the termination of it, to be stronger and in better health, than at any time, during the intervening period<sup>2</sup>.

At the rate prescribed, he would have taken eight doses in the twenty-four hours; but, making allowance for irregularities, and the periods of sleep, it may be estimated that he took, during that period, at least at the rate of five doses in the twentyfour hours, and we will suppose each dose to consist of six grains of calomel, and three grains of opium, the average between the highest and the lowest quantity prescribed. Consequently, he must have taken in the first fortnight 420 grains of calomel, and 210 grains of opium.

<sup>2</sup> This patient has since commanded an East Indiaman; is now retired from the service; and is actually in good health, (1818.)



## CASE XXXV.

*Typhus cured by Calomel, Opium, and Blisters,  
by the Editor, in 1798, at Sea.*

IN December, 1798, being in warm latitudes at sea, I was consulted, by the surgeon of the Busbridge East Indiaman, respecting the Case of Mr. Robertson, a midshipman of that ship. He had been ill, for some time, of a fever of the typhus kind, and was considered by the surgeon to be in great danger. When I visited him he appeared emaciated and low, was indistinct in perception as well as in articulation; tongue foul and parched; pulse quick and small; respiration laborious; he had some degree of *subsultus tendinum*, and picked the bed-clothes; his appearance, upon the whole, indicated, in my opinion, a speedily approaching dissolution.

I prescribed a grain and a half of calomel, and half a grain of opium, to be taken every hour; blisters were directed to be applied successively day and night; but only allowed to remain from half an hour to an hour on one place, so as to produce a constant excitation, without occasioning partially vesication and a destruction of skin. Some glysters of castor oil were also given.

In less than four-and-twenty hours all the symptoms above-mentioned, excepting the emaciation and debility, were removed. I then directed the calomel and opium to be gradually subducted, the blisters, &c. to be entirely laid aside, and some of the exciting powers of inferior degree, called tonics, together with nourishing broths, &c. to be substituted, together with a gradual return to air and exercise.

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REMARKS.

Concerning this Case I heard nothing farther. But, as the youth remained for a considerable time afterwards in an infirm state, I presume that, the danger of immediate death being over, the medicines were too abruptly withdrawn, and that some degree of visceral obstruction remained.

The doses were here repeated every hour, instead of every two hours, a deviation from principle much more excusable than that which was made in the preceding Case. On the one hand the patient was only fourteen years of age, and of a delicate habit, which indicated small doses of remedies; on the other hand, the danger from the disease was imminent, demanding prompt and efficacious means of cure. I thought of reconciling prejudice with efficacious practice, by giving a

grain and a half of calomel and half a grain of opium every hour, instead of three grains of the former, and one grain of the latter, every two hours, the quantity which I should have thought necessary for this patient. Whether the action of a dose of calomel, repeated every hour, be ultimately equal to the action of double the quantity, repeated at double the interval, I have no *data* to determine; but it would seem *à priori* that there cannot be any difference.

The short interval has these advantages, that, smaller doses being sufficient, they more readily accord with prevailing prejudices, and that, in this way, a suspension, or cessation of the action of remedies, is not so apt to occur from neglect. For these reasons, I sometimes prefer smaller doses, with the interval of an hour between them.



## CASE XXXVI.

*Fever, of which the Treatment is given as an Example of the Application of exciting Powers, approaching to scientific Correctness, by the Editor ; on Board the Busbridge East India-man, at Sea, in 1799.*

ON the 28th of May, 1799, being in warm latitudes at sea, I was requested by Mr. Arundel, surgeon of the Busbridge, to visit Mr. Nelson, a midshipman of that ship, aged 22, stout but sluggish. His complaint had been originally an intermittent fever, which, in its progress, became remittent, and afterwards continued ; and was now alarming. The principal symptoms, under which he laboured, when I first saw him, were intense head-ach ; inflamed appearance and wildness of the eyes ; difficult respiration, with a perturbed heaving of the breast, and some affection of the hysteric kind. His pulse was quick and small ; tongue very foul, blackish, and hard ; lips parched. He was in that state, in which, under the treatment prescribed by the ordinary rules of the art, patients seldom survive beyond from eighteen to four-and-twenty hours. At two o'clock P. M. six grains of calomel and two grains of opium were directed to be taken every two hours, day and night, except during the intervals

of profound sleep. A blister of small size (that of the open hand) was ordered to be applied, but not to be left longer than an hour on one place, so that while no vesication should arise, a blister might be kept constantly applied, with the exception of the intervals of sleep as already mentioned. —May 29th, Took eight pills in the course of the afternoon and night, being forty-eight grains of calomel, and sixteen grains of opium. Six blisters were applied, for one hour each. Pulse soft, full, and nearly natural. All the other symptoms considerably mitigated. Had one stool. The pills were reduced in strength one-half, the blisters omitted, and a pint (℔.) of port wine ordered to be taken daily.—30th, Has taken twelve pills since yesterday's report, being 36 grains of calomel, and twelve grains of opium. All the symptoms farther mitigated. Had one stool. Let the pills be reduced in strength one-half, and the wine continued.—31st, Continues better. A slight head-ach; some degree of yellowness of the eyes, and general debility are the only symptoms which remain. Pulse nearly in the state of health, and skin moist. Upon being strictly questioned respecting the state of his mouth, says he thinks he is sensible of a slight soreness of his teeth, or rather a sensation as if they were swelled. Has taken thirteen pills since yesterday's report (the report of to-day is in the afternoon, that of yesterday was in the morning) being nineteen grains and a half of

calomel, and six grains and a half of opium. The pills to be continued, reducing the calomel in each pill half a grain, and extending the intervals between the doses to three hours. The wine to be continued, and to have soup.

June 1st, Since yesterday has made some progress towards convalescence. Is not sensible of any affection of the teeth. Has taken seven pills, being seven grains of calomel, and three grains and a half of opium. The pills to be reduced one-half, the wine and soup to be continued, and to have some roasted chicken.—2d, Continues better. Has taken six pills, being three grains of calomel, and one grain and a half of opium. The pills, &c. to be continued, and to go upon deck at noon for the benefit of fresh air.—3d and 4th, Takes daily three grains of calomel, and one grain and a half of opium, in proportions and at intervals as before. Continues convalescent.—5th and 6th, The remedies were diminished in strength one third each day, the intervals as before, and afterwards wholly withdrawn. The class of exciting powers, called tonics, such as Peruvian bark, with ginger powder, together with nourishing food, and exercise, were now thought adequate to complete the cure. And this patient, who, for a twelvemonth, had been subject to frequent relapses of intermittent fever, with diarrhœa, became, in a fortnight, more healthy and vigo-



rous than he had been at any recent period of his life.

The following table exhibits at one view the treatment of this case.

Days.	Calomel.	Opium.	Blisters.	Diet.	Wine.	
May 29,	48 grains,	16 grains,	6			
30,	36	12			℥ 1	
31,	19	6½			1	
June 1,	7	3½			1	stools regular.
2,	3	1½		soup	1	
3,	3	1¼			1	
4,	3	1¼		roasted chicken	1	
5,	2	1			1	
6,	1½	⅔			1	
	—	—			—	
9	122½	44⅙			℥ 8	
	—	—			—	

#### REMARKS.

HERE is an example of one hundred and three and a half grains of calomel, and thirty four and a half grains of opium, taken in three days, and the good effects resulting from them certainly not equivocal. This case suggests many remarks.

1st, No purging, no salivation, nor any other unfavourable symptoms occurred, the action of the medicine having been regularly supported. Can there be a clearer proof than this that all

such symptoms arise, not from the immediate action, but from the diminution, suspension, or cessation of the action of mercury? It may perhaps be alledged that the opium, mixed with the calomel, presented these effects. But, beside that they do not arise when calomel alone is regularly applied, it is also a fact that a certain degree of salivation arises in consequence of the diminution, suspension or cessation of the action of opium (see Cases xxix, xxx, and xxxviii, of this Collection.)

2ndly, Although the treatment of this Case be offered as an example approaching to tolerable exactness in the application of scientific principles to practice, yet there are slight inaccuracies which might have been avoided. On the 30th of May, for instance, the sum of stimulant power was reduced with somewhat too much abruptness, which was consequently succeeded by a slight degree of head-ache on the following day, and a sensation of soreness or swelling of the teeth, if that was not rather an imaginary complaint suggested to the patient by the questions which I had occasion to ask. The result shews, however, that the inaccuracy was not considerable. But, in general, in the subduction of remedies, it is of much consequence to recollect that the diminution may with safety be greater, when, as happened here, the disease is overcome before the remedies have been long applied. Extending the intervals between

the doses to three hours, on the 31st of May, was also incorrect.

3dly, The gradations by which it was, in this particular instance, thought proper to subduct the remedies, are given in the foregoing table. But as generally speaking, the mode of subduction must be subject to considerable variation, when any doubt occurs in this respect, it will always be safer to subduct too slowly, than too hastily.

4thly, In all Cases, we should be exceedingly careful never to deduce inferences from any treatment, respecting the accuracy of which the testimony of patients or attendants forms the only ground of our judgment. For they are always liable to deception, when even they have no motives to deceive. In this case, however, I had a sufficient guarantee that the medicines were duly taken as prescribed. Beside that there were several gentlemen<sup>1</sup> in the ship, who took

<sup>1</sup> Captain Brown, of the Dorsetshire, Captain Alexander Campbell, of the Sovereign, and Mr. Baxter, of the East India Company's service. These gentlemen promised, if I would consent to prescribe for this patient, to see the remedies administered, upon which condition alone I acquiesced, aware that, if left to mercenary or careless attendants, principles might be discredited, and the patient injured, by their neglect. Under ordinary circumstances, it is seldom discreet to attempt a strictly scientific application of remedies.



an interest in the fate of this young man, and having a perfect confidence in my mode of practice, made a point of seeing the prescriptions regularly enforced, the decisive and rapid effects produced, were alone sufficient evidence of the medicines being duly taken.

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### CASE XXXVII.

*Threatened Apoplexy averted, by the Editor, in  
St. Helena Roads, in 1799.*

In April, 1799, laying in the roads of St. Helena, Lieut. B——tt<sup>1</sup> of the 36th regiment, a stout man, about thirty years of age, who had resided for some years in India, and lived freely, was one evening seized with great anxiety, oppression of the breast, and an alarming apprehension of an apoplectic fit; of which he had had already two paroxysms. The surgeon of the regiment being ashore, I was applied to for advice.

At his own most earnest request, I took from this patient's arm from six to eight ounces of blood. To this practice, although totally contrary to my

<sup>1</sup> Afterwards, Sir W. B——tt.

own opinion, I consented, because, as he was at all events determined to be blooded, I thought it probable, that, if I refused to perform the operation, he would find means of losing double or triple the quantity by other hands; whilst, by gaining his confidence by this compliance, I might procure an opportunity of using means which I had no doubt would prove efficacious. So great were his apprehensions of this malady, that he was persuaded he should not survive another paroxysm; and his enquiries on the subject had convinced him that blood-letting alone offered the only chance of safety.

The blood-letting being performed, I immediately gave him fifteen grains of calomel, and afterwards ten grains twice repeated, at intervals of two hours. Thus, during the early part of the night, he had taken thirty-five grains of calomel. The oppression was relieved. He slept during the remainder of the night; in the morning had *one* scanty stool; and all apprehensions of a fit were, for that time, removed. He had afterwards, as I understood, a glyster, and on the following day, a purgative by other advice; and this is all that was done.

## REMARK .

The reader will judge for himself, how far the loss of blood, the application of the calomel, the glyster, or the purgative, that were afterwards prescribed, might have merited exclusively the credit of having averted a fit of apoplexy, which, if not fatal, would in all probability have been very severe; or whether all these remedial means might have respectively contributed their share toward the effect. I will, however, suggest a few remarks to his consideration.

Blood-letting is, both by its advocates and opponents, admitted to be an operation of directly debilitating effect: and calomel, as I have shewn, cannot be denied to be a stimulant of high power. Supposing for a moment, that diseases differ otherwise than in degree; that some depend upon excessive, and others upon diminished excitement, it is nevertheless certain, that, as blood-letting, and the application of calomel, act in direct opposition to each other, they can never, at one and the same time, be proper remedies. Let us then calculate what must have happened in this case.

Either the debilitating effects of the loss of from six to eight ounces of blood, must have been



sufficiently great to overcome, not only the disease, but also the stimulant effects of the calomel; or the stimulant power of the calomel must have been sufficiently great to overcome, not only the disease, but the debilitating effects of the loss of six or eight ounces of blood. Let the reader take his choice of these suppositions, and stand by the consequences of them. With respect to the glyster and purgative, which have been mentioned, they are not here worthy of being taken into consideration, the danger having been averted previous to their being employed.

By the former supposition, the abstraction of from six to eight ounces of blood is equivalent to thirty-five grains of calomel, and a half formed fit of apoplexy. Let us suppose this half-formed fit of apoplexy equal to thirty grains of calomel. We shall then have eight ounces of blood equal to sixty-five grains of calomel. At this rate twenty ounces of blood (no uncommon evacuation in diseases supposed to depend upon excessive vigour) would be equivalent to  $162\frac{1}{2}$  grains of calomel: a supposition evidently absurd.

On the other hand, there can be no difficulty in conceiving the stimulant effects of thirty-five grains of calomel, taken in one night, to be adequate to the removal of an incipient paroxysm.

of apoplexy, and the debilitating effects of the abstraction of eight ounces of blood. The conclusion is clear and reasonable, leaving no contradictions to reconcile.

In perusing this case, the reader may not perhaps be satisfied, that, if no remedies had been used, a paroxysm would have actually occurred. But beside the preceding symptoms, and the experience of the patient, let him attend to the phenomena which succeeded the application of the remedies ; let him consider, that, after having taken thirty-five grains of calomel in one night, only one stool, and no salivation, was produced on the following morning, and that these symptoms would have undoubtedly succeeded the application of so great a quantity of mercury, or rather the cessation of its action, if the person to whom it had been applied had previously been in, or nearly in the state of health ; and he will, I think, agree with me, that this patient was not only not near the state of health, but, that he was actually on the verge of a severe apoplectic paroxysm.

These hints, I am not without hopes, may be of use in indicating a mode of preventing, if not of curing, that dangerous, and too often fatal malady.

*The following four and twenty Cases were communicated to the Editor, in 1799, by Mr. Crout, Surgeon of the Dover Castle East Indiaman, and now of St. Helena.*

### CASE XXXVIII.

*Successful application of the Doctrine of Excitation, in a Case of Phthisis Pulmonalis ; in which Ptyalism succeeded the Cessation of the Action of Opium, and was removed by its re-application, by Mr. Crout, of St. Helena, &c. in 1799.*

CAPTAIN SAMPSON, of the East India Company's ship, Dover Castle, has for the last three years, been incessantly afflicted with a cough, more violent in the night time, accompanied with nocturnal sweats, and restlessness, and almost continual expectoration of purulent matter, sometimes intermixed with streaks of dark coloured blood. These complaints were supposad to have been occasioned by great fatigue, and mental depression, during a shipwreck. He had been under the care of Dr. Warren, and other professional gentlemen of eminence, in London, without receiving any permanent benefit. On the passage from England to India, the usual routine



of treatment, in such Cases, was followed by a practitioner of reputed experience, who was a passenger in the ship, and always prescribed for Captain Sampson. During our stay at Madras, recourse was had to the most esteemed medical advice there. Their prescriptions were always faithfully followed. But the disease perceptibly gained ground, until our arrival, homeward bound, at the Island of St. Helena.

On the 4th of April 1799, Captain Sampson, standing on the poop of the *Dover Castle*, received a blow on the back of the neck, in consequence of the fall of the mizen top gallant mast, by which he was thrown down, one of his front teeth broke, the others much loosened, and an hemorrhage occasioned from the nose. He now came, for the first time, regularly under my care, as surgeon of the ship, and I determined, in treating the consequences of his accident, to comprehend in my plan the symptoms of his former complaint, applying to them solely the practice, which results from the new medical principles, a practice which, when skilfully used, is, as far as I have been able to observe, generally attended with pre-eminent success. Immediately after the accident, I gave Captain Sampson sixty drops of tincture of opium, and repeated the same quantity at the expiration of two hours. Being now somewhat recovered from the effects of the blow, the violence of

which had stunned him, I directed twenty drops only of tincture of opium to be given every two hours, in a table-spoonfull of water.

April 5th, He had slept but little during the night, but was in other respects better. The tincture of opium was continued, reduced to ten drops in each dose. The nape of his neck was rubbed with camphorated liniment.—6th, Had slept a little during the night, and was better. All the symptoms of his former complaint were less troublesome. His neck and jaw were stiff and painful. Having had no evacuation since the accident, he was directed to take the following mixture, in divided portions every two hours, until it should operate. *Man. ℥ i. nat. vitriol ℥ i. infus. sen. ℥ vi. tinct. sen. ℥ i.* In the evening this mixture had produced the desired effects, after which, twenty drops of tincture of opium was administered every two hours as before.—On the 7th, and 8th, He was greatly better, but on the 9th, was seized with vomiting of bilious coloured matter. He was directed to take two and a half grains of calomel, and a similar dose at the end of two hours.—10th, The calomel was succeeded by an evacuation downwards, and the vomiting remitted. Finding that under this plan of treatment all the symptoms of his former complaint were already sensibly mitigated, Captain Sampson now requested me to pursue what further means

I might think proper for the purpose of procuring an additional alleviation, or an entire cure of them. At this period, the expectoration was considerable, attended with cough, which was always increased during the night. The countenance was sallow and sunk, general debility and loss of appetite considerable, and he had profuse hectic sweats towards morning. Twelve drops of tincture of opium were given every two hours.—12th, Spitting, cough, and hectic relieved. The medicine was continued.—13th, The symptoms abating: the pulse less quick and more firm. The medicine was continued.—14th, The symptoms as yesterday. Continue the medicine.—15th, Finding himself greatly better, he rode into the interior of the island of St. Helena, carrying three days' medicines according to the above proportions along with him. On the 20th, he returned to St. James's valley, having suffered a return and aggravation of his former complaint, together with a very sore mouth, and some discharge of blood from the fauces. He informed me that on the 17th, finding his mouth rather sore, he had omitted the medicines. After that his mouth became sorer, and in other respects he became worse; so that the very symptom, which he designed to avoid, was increased by omitting the medicines. I now ordered twenty-five grains of opium to be divided into thirty-six pills, and one pill to be taken every hour.—21st, His mouth was rather better, and



other symptoms alleviated. The pills were continued, but at intervals of an hour and an half.—22d, The mouth and other symptoms better. The pills to be taken at intervals of two hours.—23d to the 30th, Symptoms continued to decrease. The cough occurs but seldom during the night, and he sleeps five or six hours, a happiness he had not experienced since the commencement of the voyage, nor for a long time before.

May 1st to the 4th. Medicine regularly continued. Had a glass of wine three or four times in the day. Mouth and fauces entirely well, and other symptoms decreasing.—7th, Diminished the pills to half a grain of opium every two hours.—12th, Diminished the pills to one quarter of a grain every two hours.—15th to the 21st, Flow of saliva from the fauces, and cough a little increased. Increased the opium proportionally. From this date to the 3d of June the doses were daily increased or diminished, according to the state of the symptoms, which seemed greatly to depend upon the vicissitudes of the atmosphere. On the third of June, Captain Sampson being restored to a comfortable state of health, the medicines were entirely discontinued; and there is every appearance that this will prove a permanent cure.

## REMARKS BY C. M.

SOME may perhaps be inclined to doubt that this was a distinctly marked Case of pulmonary consumption, regarding that disease as usually incurable. Without entering into this general question farther than merely to observe, that the disease is so seldom cured, not so much from its nature, as from the mode of treatment usually adopted being the very reverse of what it ought to be, I will just beg the attention of the reader to the history of this Case, by which he will perceive that the usually accredited modes of practice had been, in vain, employed with this patient, in London and Madras.

It was not until he had seen and heard of cures being performed by Mr. Crout, on these principles, in several dangerous cases of disease, and felt, in his own person, upon the occurrence of the accident that brought him under his care, the efficacy of his plan of treatment, as it regarded the symptoms of his former complaint, that Captain Sampson began to entertain sufficient confidence in Mr. Crout, to induce him to place himself regularly under his care for his pulmonic complaint. I saw Captain S. frequently during the period in ques-

tion, and have no doubt that he was labouring under phthisis pulmonalis <sup>1</sup>.

To allege that the cure of the disease was owing to change of climate, or even to the accident of the falling of the mast, rather than to the mode of treatment, is a kind of argument that has sometimes been resorted to in medicine. But I should think the whole body of evidence adduced in this work would be a sufficient answer to such general allegations.

From the 10th to the 17th of April, twelve drops of tincture of opium were taken every two hours. On the 17th, a soreness of the mouth having occurred, no doubt from an irregularity in taking the medicine, or from the intervals between the doses being too long, the opium was unadvisedly omitted; upon which the soreness increased. It was removed by the re-application of the opium.

From the 15th to the 21st of May, there was again an increased flow of saliva, and return of cough, owing to the too sudden diminution of the quantity of opium in his pills, which was accordingly again increased.

<sup>1</sup> I met him twelve years afterwards, comparatively, although in an advanced period of life, stout and vigorous.



That the disease, indicated by salivation, is produced by the cessation of the action of opium, is here twice proved. There is not the smallest reason to suspect, that, with respect to these facts, there could, in the present case, be any delusion ; such as the patient, either by mistake or design, taking mercury, along with, or instead of, the opium.

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### CASE XXXIX.

*Dysentery cured by Calomel and Opium, by Mr. Crout, in 1798, at Sea.*

SAMUEL CLINTON, ship Dover Castle, aged 32, in October, 1798, was seized with a slight dysentery, of which he was cured by rubbing in five drachms of strong mercurial ointment in five days. But having afterwards suffered a relapse, the symptoms of his disease became much more severe, assuming what is generally called a putrid appearance.

On the 12th of November, he had half hourly evacuations of black and foetid fæces, mixed with mucus and blood ; his pulse was 125, and his stomach rejected every thing. Bark, opium, wine,

the astringents usually recommended in cases of diarrhœa and dysentery, with the different remedies, which are generally prescribed in order to stop vomiting, were exhibited in vain, in almost every shape and form. On the 13th, all the symptoms became worse, with delirium. The mouth, teeth, and fauces, were covered with a black crust: and I had not, from the usual results of the common practice, in such cases, the smallest hope of his recovery. I now gave him a pill consisting of four grains of calomel and two grains of opium, which was retained on his stomach. The bark, wine, and glysters, were continued as before. The first quantity of wine given, about two hours after the pill, was retained; as was also the second quantity; the third was rejected. In the evening, I thought the pulse somewhat firmer, although not less frequent, and the other symptoms seemed also to be rather alleviated, particularly the frequency of the evacuations, and muttering delirium. I conceived good hopes, and repeated the calomel and opium with the other remedies. On the morning of the 14th I found him much better, without delirium, and having only had five evacuations during the night, with very little pain. The wine was, for the most part, retained on his stomach; the mouth and fauces, &c. were less foul; the fæces less offensive; and mucus with blood diminished; had but a confused recollection of the past day. Took six grains of calomel and two grains of opium; but the medi-

cines were diminished, as they gave uneasiness to his stomach. Has for the first time, since his delirium, begun to converse rationally.—15th, Continues to get better. Repeated the calomel and opium. Pulse 106. Offensiveness of fæces nearly gone. No pain, and but little mucus or blood.—16th, Repeated the same quantity of calomel and opium, and continued the bark, &c. Pulse 100, and increased in strength. Spirits good. Continued the calomel, &c. till the 19th. The fæces begun to acquire a natural appearance, and were evacuated only four times in the twenty-four hours. On the 21st, he was so well that his medicines were discontinued.

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REMARKS BY C. M.

This Case affords a very striking proof, as far as a single Case can go, of the efficacy of calomel and opium in dysentery. The union of prudence and decision with which Mr. Crout adopted principles and practice, which were then new, and violently opposed, does credit both to his humanity and understanding. His readiness in giving them a fair trial, arose entirely from his zeal to save the lives of the sick entrusted to his care; and a personal experience of their utility would, I am well persuaded, have confirmed him in their continuance.



## CASE XL.

*Scurvy cured by the internal Use of Nitric Acid.*

JACOB HALL, ship Dover Castle, aged 50, of a leuco-phlegmatic habit; complained, in the month of November, 1798, at sea, of a pain and stiffness of the joints of his knees, which he attributed to cold, and did not apply for medical advice.

On the 3d of December, 1798, his legs were covered with livid spots, extending above the knee. A considerable degree of œdematous swelling had taken place in his legs; his gums were sore; and breath extremely fœtid. It was a distinctly marked case of scurvy; a disease in which I had resolved, the first good opportunity, to try the effects of the nitric acid. I ordered ten drops of this acid to be taken three times a day, diluted with water; and that no deception might take place, I administered the doses myself. They were gradually increased to fifteen drops. In three days, viz. on the morning of the 6th of December, a very perceptible alteration for the better had taken place in the appearance of the patient. Swelling of the legs had considerably decreased. The medicine was continued.—7th, His joints became flexible, and he could straighten his legs. The

livid spots had begun to acquire a lighter colour.—8th, A great number of the spots had disappeared; and he could walk without pain.—9th, The spots and swelling continued to disappear.—10th, The spots and swelling entirely vanished, leaving the skin in folds, in the small of the legs, where the swelling had been most considerable. From that date, his medicine was discontinued, and he afterwards enjoyed the most perfect health and spirits.

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#### REMARKS BY C. M.

The observations, which I think it necessary to make, in respect to this Case, will equally apply to all cases of scurvy. Its symptoms are, in a great measure, the same with those which arise from the diminution, suspension, or cessation, of the action of mercury. The affection of the mouth is so completely the same, that the similitude sometimes extends even to salivation; for that symptom not unfrequently occurs in scurvy. Hence we conclude that scurvy, whatever be the power or powers, by the diminution, suspension, or cessation of whose action it arises, is in a great degree the same with the disease, which arises from the diminution, suspension, or cessation of the action of mercury. It was from this circumstance, and certainly not from experience of its effects, that mercury has hitherto been ge-

nerally supposed a deleterious agent in scurvy. But some of the subsequent cases will shew, that it is a certain cure for that disease ; a fact evincing at once the truth of the parallel here drawn between the two diseases, and the truth of these doctrines generally.

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### CASES XLI—XLIV.

*Several Cases of Scurvy, occurring among Natives of Europe, cured by Nitric Acid.*

CHARLES READING, ship Dover Castle, aged fifty-one, of a worn-out constitution, on the 28th of December, 1798, complained of stiffness of the knees, and disinclination to motion ; had large livid, and blackish spots on the left thigh, with foetid breath, &c. Ten drops of nitric acid, diluted with water, were given three times a day. No alteration was made in his diet, which consisted of salt meat. Upon the arrival of the ship at the Cape of Good Hope, on the 3d of January, 1799, all the symptoms were considerably mitigated, and the patient was in an advanced state of recovery.

The ship's company having now plenty of fresh meat and vegetables in abundance, medicine was



laid aside as unnecessary. But on the 5th of January, James Black, aged 32, Oliff Wilson, and Anthony Joseph, about the same age, appeared to have symptoms of scurvy. On the 6th, Charles Reading complained of being worse. The black spots were increasing rapidly in size, and spreading towards the groin. Having at this time no nitric acid on board, I ordered, for each of these patients, one ounce and an half of lime-juice four times a-day. Under this course, and with the advantage of plenty of fresh meat and vegetables, I confidently expected the disease to disappear; but on the 7th, Anthony Joseph alone, whose symptoms had originally been trivial, got better; or rather his scorbutic symptoms changed to those of pleurisy, which rendered proper a different mode of treatment. The others appeared to get worse. Having again procured some nitric acid, I had immediate recourse to it, in the same quantities as before prescribed. On the 14th, all these patients were perfectly recovered, excepting Charles Reading, who was however greatly better. I now thought it would be sufficient, in the case of Reading, to substitute powder of bark for the nitric acid. But, notwithstanding an abundance of fresh meat and vegetables, and the regular exhibition of the bark, the scorbutic symptoms remained quite stationary till the 20th. From that date, the nitric acid was again administered, and continued till the 26th, at which time the spots

and all the other symptoms had disappeared, and the patient was discharged in perfect health.

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#### REMARKS BY C. M.

These cases evince the decided superiority of nitric acid over lime-juice for the cure of scurvy. They also shew that, however, in slight cases of the disease, a return to proper diet and to the pleasures of the shore, may in time effect a cure; it is necessary, in order to obtain the same end more speedily, to have recourse to more efficacious means. The important facts, that both mercury and nitric acid are capable of curing scurvy, in its most severe states, may now be considered as fully established.

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#### CASES XLV—LIX.

*Several Cases of Scurvy, occurring among  
Natives of India, cured by Nitric Acid.*

ON the 11th of December, 1798, at sea, I was requested to visit the ship *Varuna*, whose crew, composed chiefly of Bengal lascars, were much

afflicted with scurvy. I found fifteen of them in an advanced stage of the disease, many of whom were supposed to be irrecoverable. As I could not wait to see the issue of my prescription, the treatment of the sick was entrusted to Capt. Smith, an intelligent passenger, who knew the Bengal language, and in the absence of medical assistance, had been accustomed to prescribe for men under his command in India.

The symptoms were these : swelling of the legs and thighs to an unusual degree ; in some a swelling of other parts of the body, and in one case a swelling of the scrotum. The spots on their legs, which, in white people, are livid, were all whitish, and of various sizes. One had ulcers ; and all of them had the other general symptoms of scurvy, as sore gums, stiff joints, &c. Two of them were swelled to so enormous a degree all over the body, that it was evident they could not live. Capt. Smith, who is well acquainted with the disposition of the natives of Bengal, thought it would be more judicious to give these two nothing, as if they should die (which in fact happened on the following day) after having taken the medicine, the rest would impute to it their death, and would, on that account, refuse to take it.

Capt. Smith was directed to give to each of the other scorbutic patients ten drops of nitric acid,



diluted with water, three times a day, increasing the dose, according to circumstances, to twenty drops. •This quantity they were taking at my second visit, which was a week from the first. I now learnt, that with some the symptoms began to abate on the third, with others on the fourth, and with all of the remaining ones on the fifth day from the first administration of the acid, observing nearly the progress stated in Cases XLI. XLIV., &c.

The person, whose scrotum had been so much enlarged, was now so greatly reduced in general size (for a similar swelling with that which principally affected the scrotum was also perceptible, in various degrees, over the rest of the body), that I should not again have recognized him. The patient, whose legs were ulcerated, was considerably better, and the ulcers in a state of incrustation. All of them had cheerful countenances, and were perfectly willing to undergo any farther medical discipline that might be enjoined.

On the 20th, I went again on board the *Varuna* ; found four of the scorbutic patients discharged from the sick list, and the rest in a state of recovery. On the 26th, six only remained ill of scurvy, and that but in a trifling degree, although the weather had been unfavourable. In these recovered, as well as in those recovering, the skin in all the parts of

their bodies, which had been swelled, remained in folds ; the swelling having subsided so fast, that there had not been time enough for the extended skin to contract to its original state. The whole of them, as I afterwards learnt, recovered in a very few days after the date of this visit ; and I should think no doubt can exist, that their recovery was owing solely to the efficacy of the nitric acid.

The usual food of the lascars on ship-board is rice and *ghee* (a kind of butter) and dried fish. *They did not live for any part of the time upon salted provisions.*

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#### REMARKS BY C. M.

That the nature of the provisions used, excepting in so far as they are deficient in nourishment, has no share in the production of scurvy, many circumstances contribute to shew. For some very judicious remarks on this disease, and several interesting facts relating to diet, the reader is referred to Anson's Voyages. The account of these Voyages, to which I allude, was written by the Chaplain of the Commodore's ship ; and his facts are not the less deserving of our confidence that his mind was probably untainted with the medical hypotheses of the schools. I

have not, at present, an opportunity of quoting his observations; but the general impression they left upon my mind is, that salt does not, more than other agents, which may be abused in their application to living bodies, tend to produce scurvy.

In the cure of this disease, the acids in general are unequivocally beneficial. What effect would alkalis produce? Those, who, applying the analogy of chemical affinities to living bodies, conclude that the effects of alkalis must necessarily be not only different from, but even contrary to the effects of acids, will be apt to spurn the question with anger or disdain. But those enquirers, who consider the laws of life as of a peculiar kind, will be less precipitate in their decision.

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## CASE LX.

*Scurvy cured by Calomel and Opium, by  
Mr. Crout, in 1799.*

February 21st, 1799, JOHN PHILLIPS, aged 31, had livid blotches on his legs; his head, trunk, and all parts of his body were swelled to an enor-



mous size. All the symptoms of scurvy, from neglecting to apply for medical assistance, had arisen to a very severe degree. He was ordered to take a pill, consisting of two grains of calomel and one grain of opium, every two hours. On the 22d, the pills were increased to three grains of calomel, and one grain and an half of opium each.—23d, The pills were increased to four grains of calomel, and two grains of opium each.—24th, No perceptible effect having been produced by the pills, they were increased to five grains of calomel, and two grains of opium each.—25th, The symptoms still remaining the same, the pills were increased to six grains of calomel and two grains of opium each.—26th, The swelling of the extremities, as well as the other parts of the body, decrease. The medicine was repeated as the day before.—27th, The swelling decreases rapidly; strength and capability of motion increasing.—28th, Diminished the quantity of calomel, and increased the quantity of opium one grain in each pill.

March 1st, Having entirely omitted the pills during the night, the mouth became very sore, and a slight degree of hemorrhage from the fauces took place. Having represented to him the bad consequences which would arise from irregularity in taking the pills, he afterwards took them punctually.—2d, His mouth was less sore; but he had

a copious flow of saliva.—3d, He was directed to take two grains of calomel, and four grains of opium, every two hours. The spots had now disappeared ; very little swelling remained, and his appetite was increasing.—4th, He continued to get better. The pills were diminished one grain of opium each.—5th, Continued to recover. Diminished the calomel one grain in each pill.—6th, The pills were continued ; and he was allowed a bottle of port-wine in the twenty-four hours.—7th, The calomel was entirely withdrawn ; but the opium was continued, decreasing the quantity daily till the 16th of March, on which day he returned to duty, without having suffered any considerable degree of exhaustion, either from the disease or the medicine.

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REMARKS BY C. M.

Here we have a severe case of scurvy, unequivocally cured by mercury and opium ; mercury being the principal power applied. The symptoms, which took place on the 1st of March, are an additional proof of the manner in which sore mouth, hæmorrhage, salivation, &c. arise in consequence of the cessation of the action of mercury. The mode of subducting the calomel and opium, from the 4th of March, was highly judicious.

## CASE LXI.

*An Anomalous Case, cured by Calomel and Opium.*

ANTHONY JOSEPH, seaman, of a tall stature and slender make, on the 3d of May, 1799, complained of pain of the thorax, and general symptoms of pleurisy of slight degree. A blister was applied, and he was ordered to take five grains of powdered nitre, dissolved in water, every two hours.—4th, Had a small degree of cough and pain; pulse 85. Repeated the nitre as before.—5th, nearly as at last report. But complaining of costiveness, I ordered four grains of calomel, and five grains of jalap to be taken directly, which produced an evacuation.—6th, he was better, but had still a little cough. The powders were repeated each of these days.—8th, He returned to duty apparently well. On the 14th, he came on the sick-list; complaining of shivering and a sensation of cold; was ordered four grains of calomel and half a drachm of rhubarb, being costive, and afterwards half a grain of opium to be taken every two hours.—15th, He was easier, although with an appearance of dejection, indicating some internal local affection. He was directed to take one grain of opium every two hours.—16th, He



was nearly in the same state, and was ordered a repetition of the same medicine.—17th, Complaining of nausea and vomiting, was ordered one grain of emetic tartar and two grains of calomel, to be taken directly, which evacuated the contents of the stomach and intestines. Afterwards one grain of opium every two hours was repeated.—18th, He had still the same nausea and vomiting, with increased debility. Ordered one grain of calomel and half a grain of opium to be taken every hour.—19th, He was nearly in the same state. The same medicines were repeated. He now complained of a deep-seated circumscribed pain of the breast. Upon examination a tumour was found between the fourth and fifth ribs of the left side externally ; but seemingly communicating with the inward affected part. The least pressure upon the tumour gave him extreme pain —20th, Vomiting very frequent. Three grains of calomel and one grain of opium was ordered to be taken every two hours.—21st, Pulse 86, tongue brown ; vomiting as before. The medicine was repeated as yesterday.—22d, Every thing was rejected from the stomach ; debility increased ; the tumour appeared now to have somewhat subsided, which induced me to lay aside an intention which I had formed of opening it ; the vomiting was more frequent than before. Ordered three grains of opium to be taken every two hours.—23d, The vomiting continued nearly as before. Repeated

the opium, which, although the only thing the stomach retained, was yet frequently rejected.—24th, He was nearly in the same state ; pulse 84. The opium was repeated as before. The tumour was somewhat less ; but still very painful.—25th, Symptoms and treatment as before. Two ounces of decoction of bark were prescribed every two hours, but it was constantly rejected.—26th, Symptoms continued as before. A blister was applied over the tumour ; tincture of opium, in decoction of bark, was given, and wine occasionally tried ; but all with the same bad success.—28th, He was so much worse in every respect, that I entertained not the least hope of his recovery. Ordered him ten grains of calomel, and an equal quantity of jalap, which produced a copious evacuation ; tincture of opium, with magnesia and water, was given every two hours, and wine in the intervals ; but they were all rejected.—29th, The tongue and fauces were covered with a dark-coloured crust. Ordered three grains of calomel and one grain of opium, to be taken every hour, which was retained on his stomach ; but the wine was rejected.—30th, Tumour nearly gone ; pulse 86. Ordered four grains of calomel and one grain of opium to be taken every hour. In the evening appeared better ; had retained the wine on his stomach several times in the course of the day.—31st, Pulse 80 ; vomited several times, and had

some degree of diarrhœa. The medicine and wine repeated as last.

June 1st. Had but little vomiting, and felt some sensations of hunger ; the tumour entirely disappeared ; and there was an increased flow from the salivary glands. Ordered two grains of opium to be taken every hour.—2d, Several small ulcerations had formed near the seat of the tumour, which discharged a considerable quantity of purulent matter ; vomiting nearly as yesterday, and had five evacuations downwards. Medicines as last.—3d, Pulse 78 ; no vomiting. Opium was reduced to one grain and an half every hour.—4th, Continues to get better, and his appetite increases ; but is much emaciated, and the evacuations continue as frequent as before.—5th, As before. Ordered two grains of calomel and one grain of opium to be taken every two hours.—6th, Evacuations less frequent. The medicines were repeated ; he had also a daily allowance of wine

The calomel and opium were gradually decreased till the 12th, when they were entirely discontinued ; the patient, although emaciated, having no longer occasion for medicine.



## REMARKS BY C. M.

THE distinct and rapid progress toward recovery, after the calomel and opium were resorted to on the 29th of May, is remarkable. On that day three grains of calomel, and one grain of opium, were prescribed every hour, and on the two following days, four grains of calomel, and one grain of opium. We shall suppose that he took only ten doses in the day, making allowance for irregularities and sleep ; the quantity, at this very moderate estimation, taken in three days, will amount to one hundred and ten grains of calomel, and thirty grains of opium. On the 1st of June, the affection of the mouth, which was commencing, was entirely prevented by two grains of opium every hour. And thus the original disease was cured, and the disease which would have arisen from the diminution, suspension, or cessation of the action of the remedy, prevented, both with promptitude and accuracy.

## CASE LXII.

*Notice respecting a Case of Lesion of the Spine, successfully treated in 1799, at St. Helena, by Mr. Crout, and the Editor.*

THE Editor exceedingly regrets that it is only in his power, owing to a circumstance which shall be presently mentioned, to give a sketch from memory of a very interesting Case, treated by Mr. Crout and himself, at the island of St. Helena, in 1799.

A gentleman of the army, Lieut. Ll—w—n, passenger from one of the Presidencies of India, fell, or threw himself, from a two pair of stairs window, and was found in a state of insensibility, with his spine apparently much injured. Some practitioners of the place, having bled him without amendment, considered the case hopeless, and left him to his fate.

Mr. Crout, then surgeon of the Dover Castle, having made himself acquainted with the particulars of this gentleman's Case, and believing that his life might yet be saved, by care, and proper treatment, came on board the Busbridge, to request that I would undertake to prescribe for Mr.

L——, in which case he very humanely offered to sit up with him, and to administer, with his own hands, the remedies, as I should prescribe them.

This he performed for several nights, until all danger was considered over; and the patient fit, with the help of a common attendant, to administer to himself. At this period, he was taking, together with the use of external remedies, opium, in doses of two grains, frequently repeated.

One night he took, as he said to ease pain, or probably in a paroxysm of despair, at once all the pills, which were left within his reach, consisting of twenty in number, or forty grains of pure opium<sup>1</sup>. Owing to the severity of the pre-existing disease, the bad consequences of the cessation of the action of this high exciting power, were not near so considerable as might have been expected; and consisted principally of a pain of the bowels, with diarrhœa.

All these new symptoms were removed, in a very short time, principally by the re-application of opium. It is proper to add, that, to the use of

<sup>1</sup> This, at twenty drops of liquid laudanum to the grain of opium, and sixty drops to the drachm, is equal to thirteen drachms and one-third; at one hundred drops to the drachm, it is equal to an ounce.



this remedy, in large quantities, he had been, in former illnesses, much habituated in India.

He had almost entirely lost the use of the lower extremities ; and, at the departure of the fleet for England, was carried to the shore in a litter, to be put on board ship. A systematic course of external, as well as internal stimulants, was now prescribed for him ; and precautions taken that he might not again commit any mistakes in respect to his medicines. During some days that we remained in the roads of St. Helena, after his embarkation, he began to shew signs of amendment, and to try to use crutches. On our arrival in England he was perfectly recovered, enjoying the free use of his limbs.

To the particulars of this case, which was altogether of an uncommon kind, I thought it right to have the sanction of the patient, a man of education ; and for that purpose, left a statement of it, carefully drawn up by Mr. Crout and myself, (but without keeping a copy) at his lodgings, for revision. He left London, as I was informed, a few days thereafter ; and I never received the statement back, nor heard from him upon the subject.

I am unwilling, from mere memory, to hazard more than this general sketch, which, however,

so far as it goes, may be depended upon. Perhaps in the recovery of the original statement, or in the preservation of a copy, Mr. Crout may have been more fortunate, or more provident, than myself; and, if so, he will assuredly not fail to inform me.

The issue of this Case, as well as that of Ensign G—— (Case X.) are very striking examples, of the superior efficacy, in falls, bruises, and hurts, of the treatment indicated by the principles of the doctrine of excitation.

*The two following Cases are by the Editor.*

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### CASE LXIII.

*Peripneumony cured by Mercury and Opium,  
in 1800, in Germany.*

IN the spring of 1800, I was called to a consultation on the Case of —— Sparks, an Englishman, resident at Hamburgh. He complained of great pain of his breast, had an excessively laborious respiration, and hard cough, with expectoration of mucus, sometimes mixed with blood. Face bloated, and cheeks extremely flushed. He had

been for several weeks ill ; and was now unable to get out of bed, and scarcely able to move in it. Pulse quick and small. Tongue black, foul, and hard, with scarcely any moisture, even at the edges. The person who had till then prescribed for him, (Mr. Ellison, an American) despaired of his recovery ; and I am well persuaded that, under the usual treatment of peripneumony, he could not have survived above forty-eight hours.

After explaining the usual effects of calomel and opium in such diseases, the necessity of a regular repetition of the doses, and my expectations of their being adequate, in this Case, to effect a cure, I prevailed to have them administered, at first in doses of three, and afterwards of two grains of the former, and one grain of the latter, every two hours, day and night. Their good effects were so evidently and speedily manifested that I had no occasion to use farther arguments for their continuance, until the violence of the disease was completely overcome. As soon as this happened, however, the usual difficulties occurred in preventing the consequences of the cessation of the action of the remedies,

On the morning after the third night of my attendance on this patient, all his symptoms being almost completely removed, excepting general debility, the intrigues, which are commonly had re-



course to, in order to obtain a remission of medical discipline, were begun. The patient and his nurse both declared that the pills had made him sick, and purged him at least twenty times during the night. Of this, being a result so contrary to what is uniformly produced under similar circumstances, I, of course, did not believe one word. I replied that he might possibly have been sick and purged ; but, if that had been the case, it must have been owing to an omission or irregularity in taking the medicines, as they never otherwise produce these effects ; that if they were not administered with perfect regularity, the patient would certainly die ; and that if he and his attendants did not promise me a faithful compliance, I should not return to see him.

This discourse had, for some time, the desired effect ; but as he became better, his impatience increased, and I could not, in subducting the remedies, keep pace with his wishes. He had now recourse to another mode of argument. This patient was known to be speculatively what is called a fatalist. He declared to me that he thought, if it was destined that he should die, no medicines could save him ; and if it was destined that he should live, it would be unnecessary to take them ; and that he would, therefore, discontinue their use. I replied, that, without entering into the merits of the general question respecting the des-

tinies, I could with certainty assure him, from my experience of the effects of the remedies which he was now using, it was destined, if he desisted from taking them, or even committed an irregularity, that he should have a very sore mouth, and a very disagreeable salivation.

Fortunately his speculative opinions had not much influence over his practical conduct. He continued for some time longer to take the medicines regularly, not choosing to trust to fate for preventing a salivation. At the end of ten days from the commencement of my attendance, he was perfectly restored to health ; and in three or four days more, the remedies, being in a state of progressive reduction, might with safety have been entirely withdrawn.

But now another obstacle arose to the regularity of our proceedings. It was avarice. Afraid of the expence of my visits, and finding himself in a state of convalescence, he intimated his opinion that there was no longer occasion for the attendance of a physician.

Had this procedure been founded on a narrowness of circumstances, I would have requested to continue my attendance without the desire of any pecuniary recompence. But the case being otherwise, as there was no danger to life, nor even of

a relapse, I received his intimation without remonstrance, only warning him against the consequence of his rashness. He was at this time able to go abroad.

About a week afterwards, I called to pay this patient a visit ; and found him, as I expected, with some degree of soreness of the mouth and swelling of the face, not however of any importance. He had got into the hands of some jobbing practitioner, who plied him with *antidotes* to mercury. He recovered his usual strength as soon as this new physician would allow him <sup>1</sup>.

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#### REMARKS.

HERE the patient and the nurse united in endeavouring to deceive me. They reported that “ the pills had vomited and purged him incessantly during the night,” meaning me to understand that they had been regularly administered. I knew, from experience, that this could not be the case, and immediately taxed them with the falsehood. “ Either you have not taken the pills, or you have not been, as you say, vomited and purged.” They seem

<sup>1</sup> This person, whose age must considerably exceed sixty, I have recently met (1814) in high health, walking the streets of London.



in silence to admit my choice of the implications. But even if they had strenuously persisted in the truth of their first assertion, it would have effected no alteration in my belief. Nature is uniform, and to be relied on ; but human veracity is not. It cannot be too frequently repeated how much this circumstance is liable, with credulous practitioners, or, indeed, with such as are not incredulous rather to an extreme, to become a source of mischievous fallacy.

It is elsewhere explained, upon general principles, why blood-letting must, in every case of disease, be injurious'. It has also now been shewn by particular facts, that in peripneumony, and diseases resembling peripneumony, in which blood-letting has been almost universally employed, mercury and opium are in general a certain cure ; yet these are agencies of a very opposite tendency to blood-letting. Let the favourers of that evacuation take what ground they please, either theoretical or practical, I am willing to meet them fairly, and to bring the question respecting blood-letting to a decision, by its merits or demerits, even in those diseases, in which it is usually considered as most appropriate.

Results of an Investigation respecting epidemic and pestilential Diseases, &c. vol. II. p. 394—454.

## CASE LXIV.

*Epistaxis cured by Calomel and Opium, in 1800,  
in Germany.*

IN February, 1800, at Hamburgh—Hohen, a wine merchant from the banks of the Rhine, robust and athletic, about forty-five years of age, was suddenly seized with a violent bleeding at the nose. In less than an hour, he lost three quarters of a large wash-hand bason full of blood. When I came to him, his nose was bleeding almost in a full stream. A surgeon arrived at the same time; he endeavoured to stop the hemorrhage by the application of styptics, plugs, &c. but in vain. The plugs were constantly thrust away by the stream of blood, which burst forth in every direction, and, when it was not allowed to have vent at the nose, ran down his throat, and had, several times, nearly suffocated him. Some tincture of opium being at hand, I gave him sixty drops of it, and repeated the dose in a quarter of an hour. This produced a considerable effect, but did not entirely stop the hemorrhage. I then prescribed three grains of opium, and eight grains of calomel to be taken immediately, and two grains of opium and six grains of calomel to be taken every two hours afterwards, until I should again see him.

The commencement of the process was early in the morning (between 8 and 9 o'clock) and I saw him again in the afternoon. He had taken three doses of the calomel and opium ; and had no return of the hemorrhage. He was feverish, and much exhausted. Anxious however, to avoid the consequences of sudden subduction of the remedies which I foresaw would be liable to happen upon the removal of all the urgent symptoms of disease, I reduced the doses to one grain of opium, and four grains of calomel. At night, when I again visited him, the exhaustion and feverish symptoms continued, but had not increased. He had much thirst ; and was allowed to drink Rhenish wine, which he was in the habit of using freely. There was no return of the hemorrhage. The calomel in each dose was reduced to three grains, the opium remaining as before.

But while I was anxious, on the one hand, to prevent, by an early reduction of them, the consequences of the cessation of the action of the remedies, I apprehended, on the other, a return of the hemorrhage ; or a severe fever from loss of blood. I therefore visited the patient repeatedly in the course of the night. The hemorrhage did actually return twice, but in a very trifling degree ; and he had a regular paroxysm of fever, consisting of a cold, hot, and sweating stage, accompanied by sickness and vomiting. The



medicines were continued without any alteration ; and in the morning of the second day, blisters were applied for a few hours. Being costive, a glyster with two ounces of oleum recini, and two ounces of Glauber's salts was given. In the evening, the calomel, in the pills, was reduced to two grains ; and a glyster of half the strength of the former was given.

The second night he passed tolerably well, with only a threatening of fever, and no return of hemorrhage. In the morning the pills were omitted, and the following mixture given as a substitute. *Æther. Vitriol.* ℥ iii. *Tinct. Opii.* ℥ ii. *aq. commun.* ℥ xi. *Syrup. cinnam.* ℥ i. *M. Sig.* A table spoonful to be taken every half hour. He was the whole time allowed to drink liberally of Rhenish wine.

From this time, no unpleasant symptom occurred. The strength of the mixture was gradually diminished ; and on the fourth day, a decoction of Peruvian bark, with elixir of vitriol, soups, and exercise were substituted in its place. Shifting blisters were occasionally applied half hourly, and glysters administered in order to support the excitement, varying the modes of excitation.

The quantity of blood lost, in all by this patient, must have exceeded considerably four pounds.

## REMARKS.

ALTHOUGH the cure, in this case, proceeded at a tolerable pace, and without any considerable accident, yet the treatment was not quite so correct as it should have been. The remedies were, from the commencement of the second morning, if not on the first evening, and afterwards all along, much too rapidly diminished. If the calomel had been continued at six grains, and the opium at two, in each dose, throughout the first night, and part of the second day, it is not probable that the hemorrhage would have returned as it did, even in a small degree, nor that any regular paroxysm of fever would have taken place. The reduction from six grains to three, was too much, and too early made, to admit of a correct scientific result. But as I could not rely on the attendants, I was obliged to prefer this alternative, to the risk of the greater evil that would have arisen from the sudden subduction of the whole. It was rendering the cure more tedious, but lessening the risk of accidents, which seemed most eligible, since there was no immediate danger to life.

As the cessation of the action of mercury occasions bleeding discharges (Cases 26, 28, 33, 60.) so its due and continued action, as in this Case, prevents and cures them. (25, 33) It has been

observed that diseases of higher degree, as epidemics, sometimes change, in their progress, into hemorrhages, which, as they are of a lower degree, affords a favourable prognostic ; and from thence it has been erroneously supposed that the cure is effected in consequence of the loss of blood. This error in reasoning, appears to have constituted one of the principal grounds for the practice of blood-letting, since the time of Hippocrates. In the same manner, diarrhœa, and salivation have been supposed to be efforts of nature to carry away morbid matter, and hence purging and salivation have been recommended for the cure of diseases.

But it is here shewn that all these symptoms, instead of being efforts of nature to carry away morbid matter, are themselves symptoms of disease.

The action of remedies called evacuant, is indeed, attended with beneficial effects. But as they produce these effects, when given so as not to be succeeded by evacuation, it is evident that their good effects do not by any means depend upon that source. Thus mercury cures fevers and hemorrhages, &c. without purging or salivation, (Cases 23. 36 and 64) as well as syphilis and many other diseases. Of this fact, as it relates to syphilis, although there are not any



examples in this work, I have met with many instances in practice; and assert it as a truth that may be depended upon. Evacuation, then, is only an incidental effect of the application of exciting powers, which results from the diminution, suspension, or cessation of their action; which has nothing to do with the cure of diseases; but is in itself a symptom of disease, and may and ought to be prevented by the repetition, at proper intervals, of doses of adequate intensity. These intervals should coincide with the period of the duration of the action of each dose of the remedy employed.

A disease may be converted into one of greater degree, as well as into one of lower degree. Hemorrhage may be converted into fever, as fever is often converted into hemorrhage. It appears probable that the fever, in this Case, was the effect of the loss of blood, together with that of the circumstances, which might have occasioned the hemorrhage. But a minuteness of distinction is the less necessary, since the same kind of treatment, according to the degree of the fever, will be proper, whatever be the powers, by the cessation of whose action it may have been produced.

## APPENDIX.

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IN the first volume of the New York Medical Repository, published in 1797, the Editors, in commenting, at considerable length, on the doctrines contained in "a View of the Science of Life," have, amongst others, the following remarks:

" considering local inflammation not as a disease  
" of excessive excitement, but of indirect debility,  
" they (the authors) contend for the propriety of  
" stimulant applications. Among other inflam-  
" mations, this doctrine is extended to burns and  
" scalds. A few facts, out of those constantly  
" passing before our eyes, will be sufficient to  
" overthrow all the reasoning on this point. The  
" recollection of every practitioner in the United  
" States, will, no doubt, supply additional in-  
" stances; though perhaps none more remark-  
" able than the following. The lady of the  
" commandant on Governor's Island, the last  
" winter, inadvertently burned one of her fingers,  
" the whole length, against an iron. The surgeon  
" of the garrison, who was present, immediately  
" caused it to be placed in cold water, which  
" was frequently supplied for a few hours, with

“ an entire cure of the burn. In the same season,  
 “ some of the people of the garrison were em-  
 “ ployed in killing hogs ; and a large quantity  
 “ of hot water was prepared, as usual, to scald  
 “ them. By accident, a pailful of this scalding  
 “ water was overthrown on the foot of a soldier.  
 “ Cold water was immediately dashed upon it, and  
 “ frequently renewed for half an hour, when he  
 “ was able to proceed with his business. Many  
 “ years ago (one of the editors of the Repository  
 “ received the facts from the persons concerned)  
 “ two brothers, apprentices to a hatter, were  
 “ employed in taking new hats from a boiler  
 “ and rincing them out in a very large tub  
 “ of cold water. Some dispute arising, one of  
 “ them lifted the other by his arms, and seated  
 “ him directly in the boiler ; but, being instantly  
 “ struck with terror at what he had done, with-  
 “ out loosing his hold, he again lifted him from  
 “ the boiler, and seated him in the tub of cold  
 “ water. The youth, who had been hurried through  
 “ these extremes of temperature, had on a pair  
 “ of wide linen trowsers, and received no other  
 “ injury than a blister, which was formed di-  
 “ rectly under the waistband, and encircled his  
 “ body.”

Without doubting the accuracy of these facts,  
 or the truth of the conclusions drawn from them,  
 in favour of cold water, as a remedy for burns



and scalds, it may however be remarked that the datum assumed, that cold water is any thing else than a stimulant or exciting power, is, according to the principles maintained in the work, which is the subject of criticism, entirely erroneous. In criticising the effects of the application of water to the living body, its degree of heat or of cold would seem to have been alone attended to. But it must be obvious to the smallest reflection that water, whether hot or cold, within certain limits, is an exciting power; and that heat can but add to its intensity. What can be more refreshing than a draught of cold water to a person exhausted or fainting? What more exhilarating than the bath, either hot or cold, in a state of languor, succeeding fatigue? What more speedily gives an appetite? And is not this in consequence of an increase of the excitement?

In mania, which has, in ancient systems, been considered as a disease depending upon too high an excitement, and is here regarded as consisting of languid excitement, especially of the intellectual organ, plunging the patient in cold water, whether by accident or design, has been frequently known to be productive of good effects. Boerhaave, Cullen, and others recommend the practice, as supposing its utility to depend upon the surprise occasioned by sudden immersion, or upon what the latter has called the sedative effects

of fear. Whatever difference may exist in the explanation of it, the fact seems to be on all hands agreed upon, that the cold bath is useful in mania. Persons have also been cured of delirium, by throwing themselves into cold water. But the utility of opium, camphor, and other agents unquestionably of high exciting power, is fully admitted in these diseases. It will then follow, that mania and phrenitis being considered diseases of diminished excitement, and capable of being alleviated or cured by opium, camphor, &c. which are high exciting powers, cold water, which has also cured or alleviated them, must be considered a stimulant or exciting power. Or, if they be supposed diseases of excessive excitement, and cold water a positive sedative (neither of which are admitted to exist in nature) opium and camphor must also be considered sedative, or directly debilitating powers, which would be absurd.

In Turkey, water carriers, it is said, are less subject than others to the plague. So are those, who are under the influence of mercury<sup>1</sup>. I have observed that persons, who, in the course of their occupations, are much among water, are liable to a sponginess and discoloration of the gums, not widely dissimilar from that which is produced

<sup>1</sup> Olivier's Travels in the Ottoman Empire, Egypt, and Persia, vol. 1, chap. 15.

by that metal. During the plague of Marseilles, hard drinkers were observed to escape that malady oftener than others. These facts would appear to assimilate, in their effects upon the living body, the action of water, mercury and alkohol, the two latter of which are indisputably stimulant, or exciting powers.

It is a common occurrence to see the slaves, who work among water, in the marshy grounds, between Kingston and Spanish town, in Jamaica, afflicted with the disease called elephantiasis. Their occupation is cutting, and carrying home, a long grass, which grows in these marshes. The same disease, on the coast of Malabar, known to the English by the name of cochin-legs, is, I have no doubt, principally owing to the humidity of the situation, and the particular qualities of the water. And does not the glandular disease of Barbadoes depend more upon the same source than Doctor Hendy, in his memoir upon that subject, seems willing to admit?

If, then, the frequent application of cold water be succeeded by disease, as elephantiasis, prevents disease, as plague, and cures or alleviates disease, as burns and scalds, mania and phrenitis, must we not conclude that it is, like every other agent which is capable of operating upon the living body, a stimulant or exciting power? Thus we



see that facts, which, by the assumption of an erroneous datum, were considered conclusive against the theory that inflammation is a disease of languid excitement, are, in this view of the subject, additional evidence in its favour; and I am persuaded that, in a reconciliation of facts so apparently opposite, and having so extensive an influence on medical science, the respectable Editors of the New York Medical Repository, if it should appear to them in the same light, will equally rejoice.

I have freely admitted that cold water may be a remedy of a certain degree of efficiency in burns and scalds. But I must warn those, who, having taken for granted that inflammation is a disease of excessive excitement, conclude that cold water must necessarily be a sedative; or, having taken for granted that cold water is a sedative, conclude that those inflammations, which it cures, must necessarily be diseases of excessive excitement, of some farther difficulties, which they will have to encounter, before they can make good their point. In order to render their doctrine consistent, they will have to shew that vinegar, fluor volatile alkali, and the spirits and oil of turpentine, which have been found in practice to be better remedies for burns and scalds than cold water, are sedative, not stimulant, powers.

The salutary effects of water, as drink; the alledged utility of cold ablution in fevers, according to an old doctrine lately revived; and the efficiency of cold water in gout, as stated by Dr. Kinglake (all of which, when reduced to their just value, are worthy of a certain degree of attention and credit) may be adduced in farther support of my present argument.

I take this opportunity of expressing my grateful sense of the propriety and decorum, with which my doctrines have been controverted by the Editors of the New York Medical Repository; and of assuring them, that, when I have the misfortune to differ from them in opinion, my dissent is accompanied by those feelings of respectful consideration, to which their independence, integrity and fairness, so fully entitle them.

It may not be irrelevant here to state some instances of burns by the explosion of gunpowder, which came immediately within my own observation. On one occasion, the patients (seven in number) were treated, with the most unfortunate results, according to the antiphlogistic practice; on another, four of them, who complied with directions, experienced the happiest effects from the due application of exciting powers, whilst the fifth, who refused medical aid, perished.

## CASE LXV—LXXIII.

*Nine fatal Cases of Burns, from the Explosion of Gunpowder, treated according to the anti-phlogistic Plan.*

IN January, 1794, whilst laying in Batavia Roads, in the East Indies, I was called to a consultation on board the William Pitt, East India-man on the Cases of nine men, who had been the day before severely burnt by the explosion of gunpowder. None of them appeared to me to be in a state that did not admit, by proper treatment, of a recovery. Believing the most likely method to obtain that end would be the application of an appropriate exciting power to the surface that was injured, I recommended having them wrapped in sheets, and the sheets to be kept constantly sprinkled with vinegar. This I conceived would have been sufficient, with the administration, in the worst cases, of small, but repeated doses of opium, and occasionally of glysters of castor oil, &c.

Six of the medical gentlemen present being unanimously of a different opinion, the surgeon of the ship to which the men belonged (the William Pitt), guided by the opinions of the majority, determined to enforce the antiphlogistic plan of treatment. I did not afterwards see these men; but was informed that several of them died



within a few days : and not one, I believe, survived the effects of the accident.

That men who lived for several days, and did not, at the commencement, evince any very alarming symptoms, were capable of being cured by a degree of exciting power equal to that which cures a severe fever, that would otherwise, in a few days, prove fatal, we are, I think fully warranted in concluding, both on general grounds, and from the very different result of that mode of treatment pursued in the Cases which follow. Accidents of this kind, from the nature and situation of the parts principally affected, admit, more than diseases in general, of the application of appropriate remedies. There was here no lesion of any organ essential to life. The disease, instead of excessive excitement, consisted of a diminished or languid excitement extensively over the surface; and an adequately extensive application of exciting powers, as remedies, might easily have been made. But on the one hand, I had not, at that time, the confidence, since derived from experience, sufficiently to urge a mode of treatment, which, although obviously the most rational, had the disadvantage of being new; and, on the other hand, my colleagues, being tinctured with the old doctrines of inflammation, were not easily to be persuaded that a practice so repugnant to those doctrines, as that which I recommended, could be founded on any thing but hypotheses.

## CASE LXXIV—LXXVIII.

*Four Cases of Burns, from the Explosion of Gunpowder, cured according to the Principles of the Doctrine of Excitation ; and one fatal Case, in which the Patient refused medical Aid.*

SOME time afterwards I had five Cases of burns, from the explosion of gunpowder, under my sole management, in the Houghton. The burns being extensive, the patients were wrapped in sheets covering the whole body, and the sheets constantly kept moist with vinegar, until the pain and inflammation of the surface almost wholly subsided, which happened in about three days. Opiates and glysters were occasionally administered. Four of these patients, who implicitly conformed to the treatment directed, speedily recovered. But the fifth (a seaman) refused all medical advice. I, therefore, did not particularly attend to the progress of his malady. He pursued, it seems, some process of his own, which, as I afterwards learnt from his messmates, when he was dying, consisted principally in having, from time to time, a bucket of cold salt water thrown over him, and living upon a rice diet. In this manner, he lingered several weeks, persisting to refuse all medical aid. And as his case was, at the commencement, even

slighter than those of some of the four, who recovered, I have no hesitation in imputing his death solely to his own obstinacy.

We have farther practical evidence of the good effects, produced in diseases, which arise from accidents of this kind, by the external application of vinegar, as described by Cleghorn, of fluor volatile alkali, as stated by Le Sage, and of spirits and oil of turpentine, as related by Kentish.

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### CASE LXXIX.

*Plague cured by Calomel and Opium, in the Pest Hospital, near the Seven Towers, at Constantinople, in August, 1815.*

TUMUS, of Harvanitia, in Roumelia, a baker, from Jubailie, in Constantinople, aged 22, was brought to the Pest-house, on the 17th of August, having been six days ill of the plague. Tongue very foul, and covered with a thick whitish crust. Pulse scarcely perceptible, and exceeding 130. Body covered with petechiæ; breathing laborious; flesh tremulous; expression fatuitous; eyes sunk. The interpreter not being able to explain the few words he could utter, I could only form my judg-



ment from the phænomena before my eyes. At twelve o'clock at noon I gave him ten grains of calomel, and three grains of opium. Two o'clock P. M. found him asleep, and in a perspiration. Pulse considerably raised. I administered eight grains of calomel, and three grains of opium. Four o'clock P. M. has been asleep almost all the time since my last visit. Tongue rather less charged. Skin moist. Pulse 76, but small. Six grains of calomel, and two of opium. Six o'clock P. M. has continued to sleep. Tongue as at last report. Skin moist. Pulse 72, and of moderate fulness. I gave him five grains of calomel and two of opium. Eight o'clock P. M. skin, tongue, and pulse, as before. Sleeps much. Six grains of calomel, and two of opium. Ten o'clock P. M. as at last report. Pulse 70. Four grains of calomel, and two of opium.—18th, Six o'clock A. M. Pulse 72. Skin moist. Tongue dry. Four grains of calomel, and two of opium. Eight o'clock A. M. tongue less dry. Pulse 64. Four grains of calomel and one of opium. Eleven o'clock A. M. much in the same state as at last report. Pulse 72. Six grains of calomel and two of opium. Two o'clock P. M. tongue &c. as before. Six grains of calomel and two of opium. Has taken some soup. Five o'clock P. M. Tongue moister. Pulse 64. Four grains of calomel and two of opium. Nine o'clock P. M. tongue ulcerated at the edges. Pulse 64. The Greek Priest (Parthenius) informed

me, that this patient had run out into the yard, in a state of delirium, in the course of the afternoon. But, as this tale was utterly incredible, the man being in a state of convalescence, I considered it as a mode of preparing me for a tragedy which, I made no doubt, was intended to be performed, in the course of the night, upon poor Tumus, as had already happened to two other patients; and desired the interpreter to intimate to the priest my disbelief and suspicions, as well as my determination, in the event of the catastrophe contemplated, to take him before the Directors of the Hospital in the morning. Five grains of calomel were administered.—Aug. 19th, ten o'clock, A. M. Although the priest had been deterred from carrying his design into effect against Tumus, by what transpired on the preceding evening, I thought it necessary to represent my suspicions, with the grounds of them, to the Directors, and to give them the alternative of dismissing the Papas, or of my retiring from the Hospital. He was dismissed. Upon my return to the Pest House, at ten o'clock, A. M. I found Tumus as yesterday. Pulse 84. Two grains of calomel, and two grains of opium. Half past one o'clock, P. M. Tongue as before; pulse 76; complains of soreness of mouth. Had only one grain of calomel. Five o'clock, P. M. Pulse 72; tongue as before; has had no stool for some days. One grain of calomel was given, and half a drachm of jalap was directed to be taken an

hour afterwards. Nine o'clock, P. M. pulse 72; tongue as before; no stool. Took half a drachm of jalap.—Aug. 20th, Seven o'clock, A. M. pulse 86; tongue moist; had one stool. One grain of calomel and one grain of opium. Nine o'clock, A. M. pulse and tongue as before. One grain of calomel.

From this period, no regular reports were made of this patient's case until the 23d of August, when he is stated to have left the Pest House, and gone to Constantinople in an advanced stage of convalescence, i. e. six days after his admission.

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#### REMARKS.

ON the first day of admission, this patient took, from twelve at noon to ten at night, thirty-nine grains of calomel, and fourteen grains of opium, which, notwithstanding the disadvantage of being obliged to omit night prescription, was sufficient at once to repel the danger. That he took the medicines, as prescribed, is certain; for they were all administered by my own hand.

From the various capacities of Physician, Apothecary, Orderly, and Clerk, in which I was



obliged to officiate, I could only write the reports short. On the first days, nothing is said of the state of the bowels, probably because, finding all the alarming symptoms so readily yield to the remedies, it was not considered necessary to attend to this particular function ; but, when constipation was observed, as a symptom of debility, it was immediately attended to.

It was omitted to note at what time the *petechiæ* disappeared.

If the remedies could have been administered at night, this patient would have taken upwards of eighty grains of calomel, and thirty grains of opium, in the course of the first twenty-four hours ; and there is no doubt that the cure would have, in such case, been more rapid. Enough, however, was done, previous to bed-time on the first day, to raise the excitement, so to avert all immediate danger ; and the mitigation of disease, on the second day, when the priest Parthenius, in contemplation of his projected tragedy, represented him as delirious, was so far advanced, that, if no farther remedies had been employed, recovery would have speedily followed. On the third day of the treatment, I considered him so far advanced in convalescence, as to require, at ten o'clock, A. M. only two grains of calomel, and two grains of opium ; and at half past one o'clock,

P. M. only one grain of calomel. At this latter period he mentioned a soreness of the mouth ; but it did not increase : no salivation ensued ; and, as the mercury had been only for two days administered, previous to its diminution, the usual means of obviating the consequences of the cessation of its action, after having been for some time in application, were not thought necessary.

Had the treatment of this patient been commenced on the first, second, or even third day of the malady, the same degree of power would not have been necessary, and much less time would have been required to remove the disease. This is not vague conjecture, but a broad inference from numerous facts. The results are indeed so certain, that any person, having repeatedly seen the processes by which they are obtained, will be able to prescribe, in ordinary cases, with the certainty of effecting a cure, even if he should be wholly unacquainted with the principles upon which these processes are founded.

Some account of the intrigues practised upon this occasion, have been given in the Second Volume of my “ Results of an Investigation, respecting Epidemic and Pestilential Diseases, including Researches in the Levant, concerning the Plague,” Book VII.

## CASE LXXX.

*Plague cured by Mercury and Opium, at the Pest Hospital, near the Seven Towers, at Constantinople, in August, 1815.*

MISSAIL, of Duncape, in Constantinople, aged 30, and stout, was admitted on Sunday, the 20th of August, labouring under the usual symptoms of plague, with a large carbuncle on his right breast ; tongue white, but moist ; pulse 112. One o'clock, P. M. Had been ill three days. To have six grains of calomel and three of opium. Three o'clock, P. M. Tongue moist ; pulse 116. Six grains of calomel and three of opium. Half past five o'clock, P. M. Tongue moist ; pulse 120. Six grains of calomel and three of opium.

It was about the period of this visit, that I experienced the first symptom, indicating an attack of plague. Having laid down to sleep, I was, upon waking, seized with vomiting, languor, &c. as described in another place. This rendered it impossible for me to continue to visit the patients regularly at intervals of two hours, as I had hitherto been accustomed to do. I was therefore obliged for the rest of this evening, and the whole of Monday the 21st of August, to remain in my



room, and content myself with sending medicines by the interpreter, to the sick. During the whole of that period, they were continued to be sent to Missail, at the rate already stated ; but, whether they were faithfully administered, I have no certain means of determining. From the progress of the patient, the presumption, however is, that there was no material omission. He had the advantage of being placed in a room adjacent to my own, of which I had the key, and which I locked at night, as a precaution, after the affair of Tumus, and the two patients who were suspected to have been poisoned. By this means he was under a kind of surveillance ; and being an intelligent fellow, and in perfect possession of his senses, it was not probable, that, under such circumstances, he would have been chosen as a proper subject to tamper with, or to neglect, especially as the dismissal of the Papa had only taken place on the preceding day (the 19th of August), and the rest of the attendants would, at least for the moment, and whilst they were ignorant as to the nature, or probable duration of my illness, observe an increased vigilance in the execution of their orders.

Tuesday, August 22. Nine o'clock A. M. Although very much indisposed, I exerted myself in order to visit the sick. I found Missail improving ; but the pain of his breast very severe. Pulse 108,

and Tongue moist. Six grains of calomel, and two of opium. Eleven o'clock A. M. The pain from the carbuncle continuing great, a large plaster of strong mercurial ointment was applied to the breast, which was deemed equivalent to the calomel and opium, and to supersede the necessity of their repetition. One o'clock P. M. As at last report. Four grains of calomel, and four grains of opium. Four o'clock P. M. Much the same. Calomel and opium as last. Eight o'clock P. M. Much the same. Five grains of calomel, and five grains of opium. —Wednesday, August, 23d. Being this day again too ill to be able to visit the sick, I sent their medicines by the interpreter. Three grains of calomel, and three grains of opium were the doses sent to Missail; and ambulating blisters were directed to be applied round the chest, in the neighbourhood of the carbuncle, as well to act upon that part, as to obviate the effects of the diminution of the quantity of the other agents. —Tuesday, August 25th. Pulse 104. Tongue white but moist. Seems upon the whole better: but carbuncle continues painful. The medicines continued at the rate of three grains of calomel and three grains of opium; and mercurial plasters to the carbuncle. —Friday, August 25th. Passed a good night. I had the key of his chamber in my possession. He was able to help himself to drink, &c. in the night, without assistance from the servants of the Hospital. Breast mortifying.



An opium cataplasm was applied to the breast. Four o'clock P. M. Tongue as before. Pulse 100. Complains of soreness of his mouth. The unsound, consisting of nearly the whole body of the right breast, separating in a regular circle from the surrounding sound parts. The opium cataplasm to be continued, and three grains of calomel internally without the opium. Evening. In the same state. Medicines continued.—Saturday, August 26th. Morning. Continues to improve. To have two grains of calomel, and a plaster of Turner's cerate to be applied to the breast. Seven o'clock P. M. Better. Two grains of calomel; and a plaster.—Sunday, August 27th. Nine o'clock A. M. Continues to mend. One grain of calomel and one grain of opium, and a Turner's cerate plaster. Eight o'clock P. M. The same. Two grains of calomel and two of opium, and a plaster.—Monday, August 28th. To have two grains of calomel, and a plaster. Pulse varies from 80 to 100. Tongue moist and less charged; breast sloughing.—Tuesday, August 29th. Convalescent. The calomel and opium, in small doses, to be continued, and the plaster to be regularly changed. No affection of the mouth.—Wednesday, August 30th, convalescent. The same treatment to be continued,—Thursday, August 31st, when I left the Hospital this day, he was considerably advanced in convalescence.



## REMARKS.

It will be observed, that the relative proportions of the calomel and opium were, in this case, occasionally varied, according as it was thought the affection of the circulating system, or that of the brain and nerves preponderated; or according to the views entertained of the danger of any considerable affection of the mouth occurring, from the unavoidable irregularity in the repetition of the doses, arising partly from the necessity of dispensing entirely with night prescription, and partly from my inability, for some portion of the time, to make regular visits, and to administer the remedies in person, even in the day.

Whenever, in the course of the treatment of this patient, my visits were not repeated pretty regularly at intervals of two hours, the irregularity arose from the uncertain state of my power, whilst labouring under disease, of carrying my intentions into effect. It was on the day after the admission of Missail, that I was seized with the plague. My struggles against the disease were incessant, both for my own advantage, and that of my patients; and my visits were as frequent as, under such circumstances, was practicable; indeed much more frequent than Physicians to Hospitals in general

think it necessary, at any time, to make. But, still, besides the want of night prescription, which could not be obviated, a considerable inaccuracy arose, in the daily treatment of this patient, from the circumstances of my sickness. The progress which he made toward recovery however was, notwithstanding, rapid, when compared to the ordinary progress, under ordinary treatment, of diseases of a similar kind. And, when I left the Hospital, eleven days after his admission, he required nothing more than tonics and nourishment, to restore him in a few days completely to health. These, indeed, I thought it superfluous to enjoin, knowing that tonics, or any other remedies which I might leave behind me, would not be administered, and that nourishment was not in the system of the Hospital. I therefore contented myself with recommending to the patient to quit it as soon as possible, and to get amongst his friends and relations as soon as they would receive him, where he could be supplied with proper food. Whether he found the means of complying with my advice, I did not learn.

This was one of the very few patients that was brought to me previous to the sixth day of the malady. He had only been three days ill. From the beginning I entertained well-grounded expectations of a cure; and, in order to prevent tampering, I had this patient placed in a chamber

adjacent to my own, of which I kept the key, locking it at night, after taking care that he was supplied with drink, and whatever else he might require. This, as he suffered no alienation of mind, I considered, although objectionable, a much safer plan, both for the patient and for my researches, than leaving him exposed to the dangers which might have arisen from a free intercourse with the servants of the Hospital, so deeply interested, as I have elsewhere shewn, in frustrating the object of my enquiries, and so little scrupulous about the means.

Finding in my notes no particular mention of the state of the bowels, I conclude that they did not suffer any material derangement from the malady.

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#### CASES LXXXI AND LXXXII.

*Fever, with Delirium, cured under singular Circumstances, communicated by Dr. William Dick.*

“ A SURGEON’S Mate of an Indiaman, who was  
 “ much exposed to the sun in attending three  
 “ ships at Diamond Harbour, in the sickly season,  
 “ was seized one day, about two P. M. when on



“ board of another ship, with chilliness, severe  
 “ head-ache, pains in his loins and all over him,  
 “ incessant vomiting, in short, most of the symp-  
 “ toms of the worst fever. He went on board of his  
 “ own ship, and drank plentifully of warm water  
 “ till it came up clear. He then took a pill con-  
 “ taining five grains of calomel, of which he had  
 “ a box-full in his pocket. He put the box on his  
 “ table, and desired the Surgeon’s servant, who  
 “ was attending him, to give him another pill  
 “ out of the box, at the end of an hour, if he  
 “ should be delirious, and not collected enough  
 “ to take it himself; for he was aware that de-  
 “ lirium was coming on. He took it however  
 “ himself, but repeated his injunctions to the  
 “ man, who, finding him quite raving at the  
 “ end of the third hour, gave him a pill, and  
 “ continued to do so every hour for twenty-four  
 “ hours. He then got another servant to attend  
 “ him, while he took some hours rest. The pills  
 “ were regularly continued until he had taken two  
 “ hundred and fifty-five grains, when he awoke  
 “ as from a sound sleep, and felt only languid,  
 “ with a little tenderness of the gums; but in two  
 “ days was quite well, and continued so. I could  
 “ depend,” says Dr. Dick, “ on this gentleman’s  
 “ veracity.”

“ A Surgeon of a ship was cured in a similar  
 manner.”

## REMARKS.

ACCORDING to what has been shewn to be the proper species of evidence, in scientific matters, it would not be right to give full credence to facts of this kind, and to act upon them, upon the mere ground of the credibility of the persons relating them. But when, from numerous, almost innumerable instances, we know that the processes stated are capable of being followed by the alleged results, we can have no reasonable ground of doubt respecting the truth of particular narrations. A similar circumstance happened to myself, upon being seized with a Typhus fever, in the year 1800, in Germany. Conscious of approaching delirium, before the remedies had time to operate, I directed my servant, Andreas Friberg, a faithful and attached native of Sweden, how he should administer them, in the event of its actual occurrence. This task he, for two nights and one day, most punctually performed, and with the desired effect. The quantities administered were not recorded; and I retain no precise recollection of them. In fact, having, for several years previous to that period, considered the curative processes described as certain of being followed by determinate results, I regarded them no longer as experiments. Cures,

under this plan of treatment, became common, and, when extensive organic lesion had not already taken place, invariable occurrences. Novelty having lost its effect, the ardour for producing conviction having abated, the intention of farther publication being suspended, and my own mind (as to fevers at least) being perfectly satisfied upon the subject, no motive operated with sufficient power to outweigh the irksomeness and monotony of the task of preserving dry records, which might never be brought into application. Circumstances, however, have considerably altered within these few years: my views have materially changed: my hopes of being able to render essential services to the publick have revived: and I now exceedingly regret the supineness, the carelessness, or want of motive, by which it happened, that I neglected since 1800, to keep accurate memoranda of my medical proceedings, as formerly. For this neglect, I shall hereafter endeavour to make atonement.

THE END.















